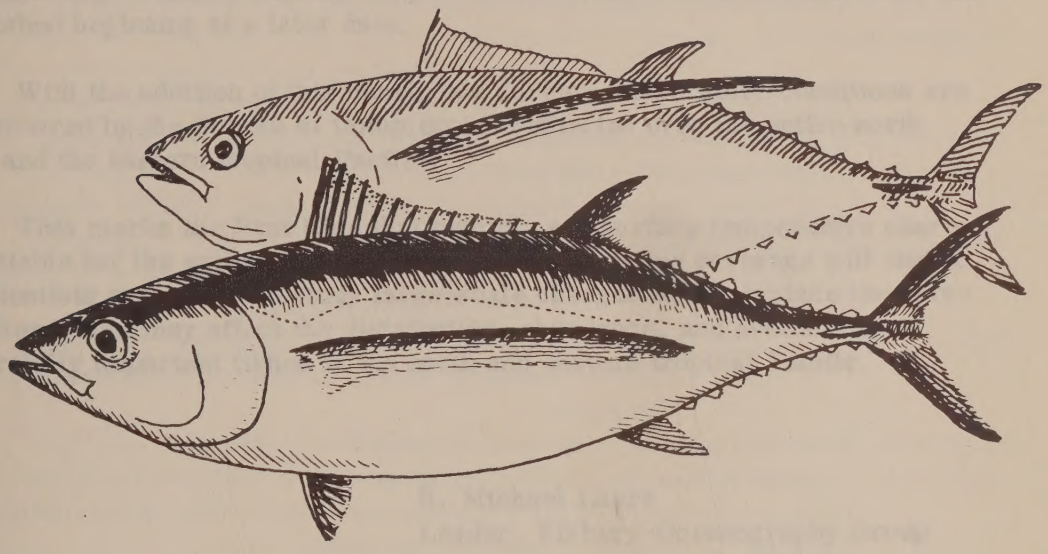
FISHING INFORMATION

JULY 1970



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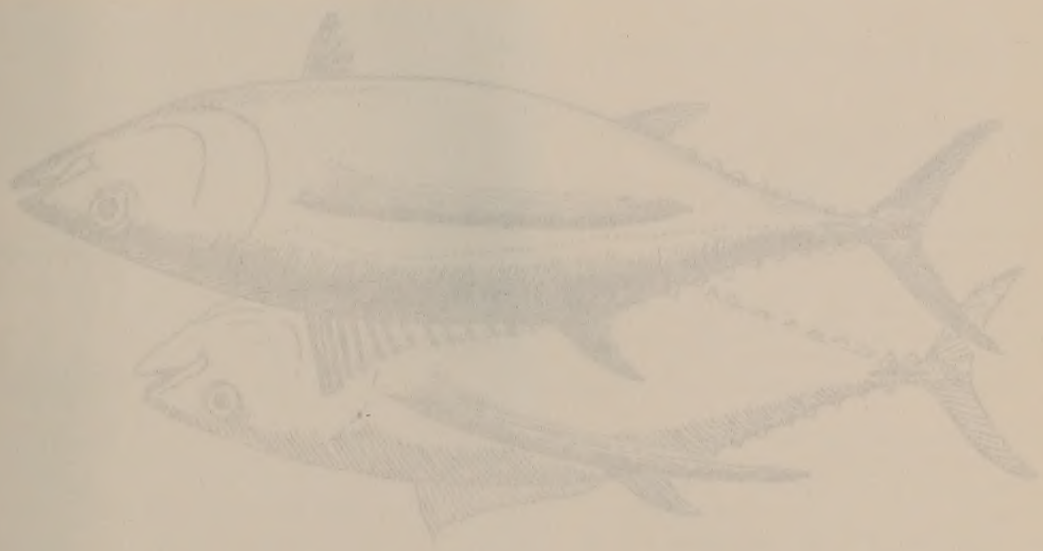
UNITED STATES DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE
BUREAU OF COMMERCIAL FISHERIES
FISHERY-OCEANOGRAPHY CENTER
LA JOLLA, CALIFORNIA



FISHING INFORMATION

NEW SEA SURFACE TEMPERATURE CHART FOR THE NORTHWESTERN PACIFIC

This issue of Fishing Information contains a new sea surface temperature isotherm chart for the northwest Pacific which will be published each month. Yearly and long-term sea surface temperature anomaly charts for this area will be published beginning at a later date.

With the addition of this chart, sea surface temperature conditions are now monitored by the Bureau of Commercial Fisheries over the entire north Pacific and the eastern tropical Pacific.

This marks the first time that monthly sea surface temperature charts are available for the entire north Pacific. This extensive coverage will enable BCF scientists and others to study large-scale changes in sea surface temperature patterns that may affect the distribution, abundance, and availability of commercially important fishes in the north and eastern tropical Pacific.

R. Michael Laurs
Leader, Fishery-Oceanography Group

SEA SURFACE TEMPERATURE CHARTS, EASTERN PACIFIC OCEAN
JULY 1970

Acknowledgements

The following organizations and stations contributed data for the July 1970 charts:

U.S. Bureau of Commercial Fisheries Biological Laboratories La Jolla, California, Honolulu, Hawaii, and Seattle, Washington
U.S. Coast Guard Cutter ACUSHNET
U.S. Naval Weather Service, Fleet Numerical Weather Central, Monterey, California
Chevron Shipping Company; IDAHO STANDARD
Environmental Science Services Administration
U.S. Weather Bureau, San Diego, California
U.S. Coast and Geodetic Survey, Pacific Marine Center, Seattle, Washington
Fish Commission of Oregon, Clackamas, Oregon
General Dynamics Convair Division; Ocean Data Buoy ALPHA
Hopkins Marine Station, Pacific Grove, California, J. P. Balesteri
Instituto de Fomento Pesquero, Santiago, Chile
Instituto Hidrografico de la Armada, Valparaiso, Chile
Inter-American Geodetic Survey by L. Peren at Puerto Armuelles, Panama; D. Chavez at Talara, Peru
Kelco Company, San Diego, California
LMR Inc., San Diego, California
Oregon State University, Department of Oceanography, Corvallis, Oregon
Pacific Missile Range, Range Operations Department, Geophysics Division, Point Mugu, California
Scripps Institution of Oceanography, La Jolla, California, by Margaret Robinson
Scripps Institution of Oceanography Research Vessels ALEXANDER AGASSIZ, THOMAS WASHINGTON, ELLEN B. SCRIPPS, FLIP, MELVILLE, ALPHA HELIX, ORB
University of Washington, Seattle, Washington; R/V THOMAS THOMPSON
Fishing Vessels ANNE M, CONNIE JEAN, TYPHOON
Pacific Oceanographic Group, Nanaimo, British Columbia, by H. J. Hollister from observations by G. C. Wilks at Langara Island Light.

Charts

Figure 1. --Mean sea surface temperature, eastern north Pacific Ocean. Squares show temperatures at weather ship stations. Numerals on shore are temperatures at coastal and lightship stations.

Figure 2. --Mean sea surface temperature chart, western north Pacific Ocean. Squares show temperatures at weather ship stations. Numerals on shore are temperatures at coastal and lightship stations.

Figure 3. --Deviation of sea surface temperatures, eastern north Pacific Ocean from long term charts of H. O. 225. Hatched areas are colder in 1970.

Figure 4. --Deviation of sea surface temperatures, eastern north Pacific Ocean from those of July 1969. Hatched areas are colder in 1970.

Figure 5. --Mean sea surface temperature, eastern tropical Pacific Ocean. Numerals on shore are temperatures at coastal stations.

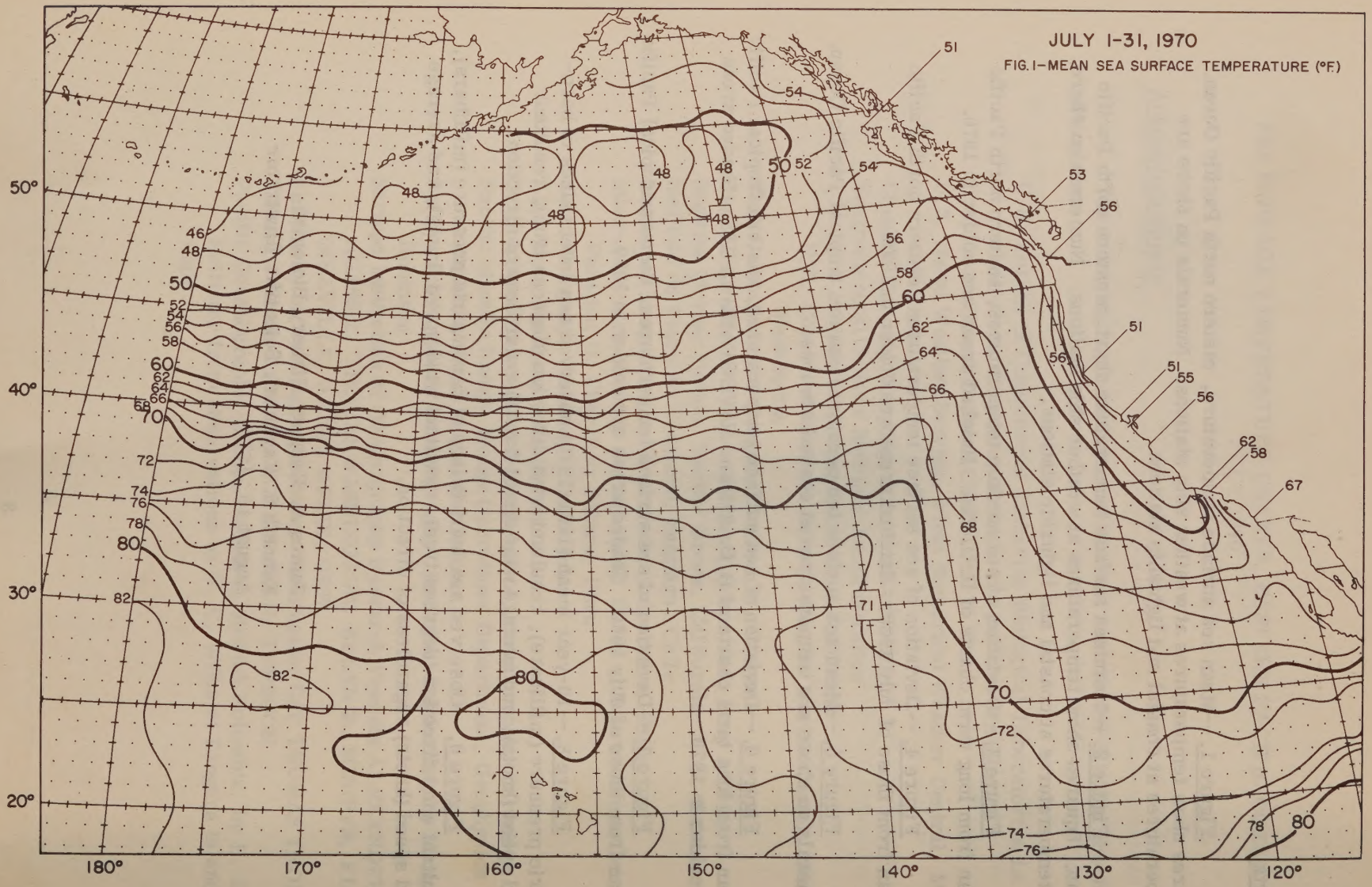
Figure 6. --Deviation of sea surface temperatures, eastern tropical Pacific Ocean from long term charts of H. O. 225 and NAVOCEANO sp-123. Shaded areas are colder in 1970.

Figure 7. --Deviation of sea surface temperatures, eastern tropical Pacific Ocean from those of July 1969. Shaded areas are colder in 1970.

Figure 8. --10-year mean (1961-1970) observed sea level values of barometric pressure (millibars), resultant wind direction (degrees true), resultant wind speed (knots), and average wind speed (knots) regardless of direction.

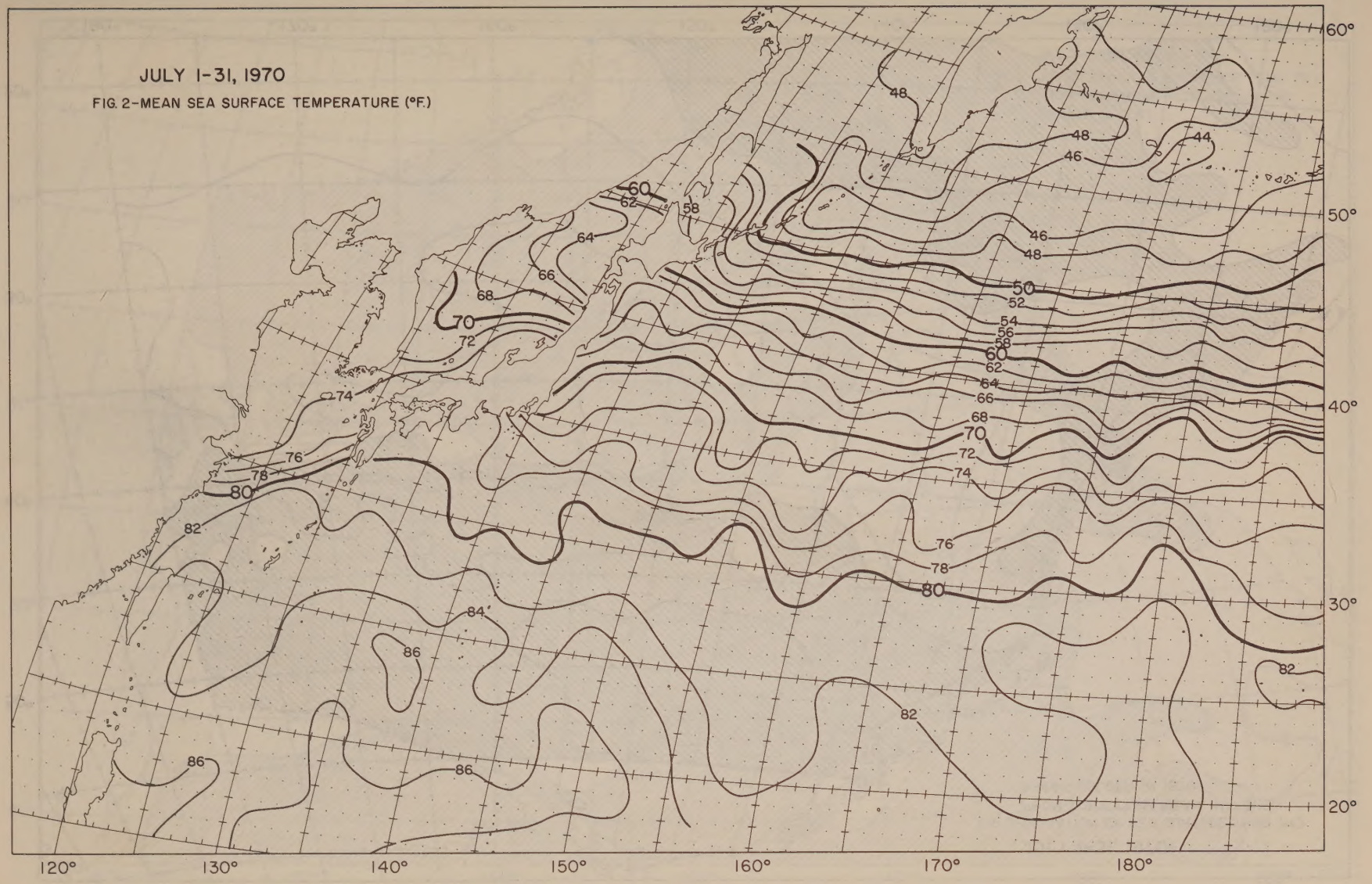
Figure 9. --Observed sea level values of barometric pressure (millibars), resultant wind direction (degrees true), resultant wind speed (knots), and average wind speed (knots) regardless of direction.

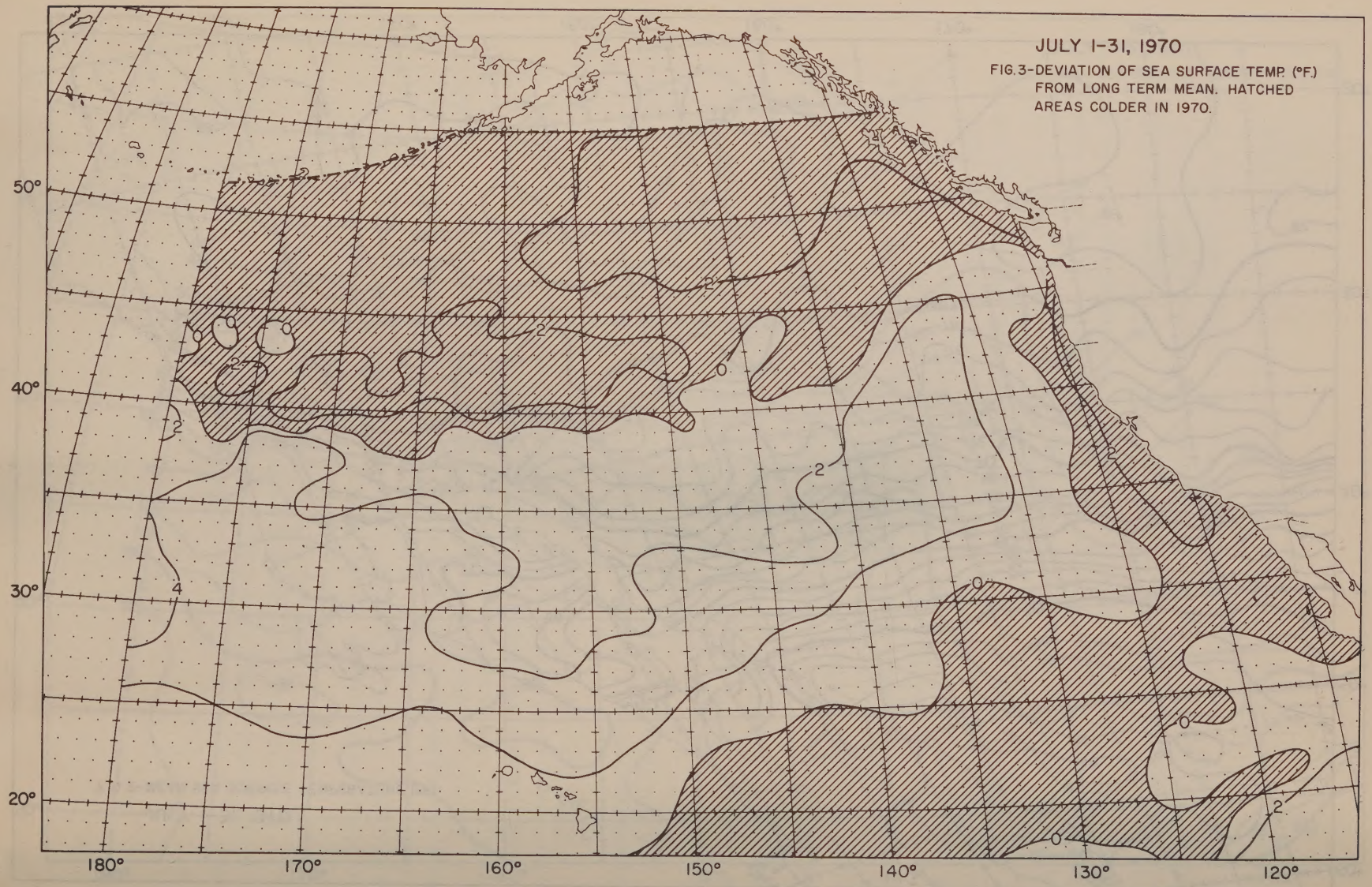
James A. Renner, Fishery Biologist
Kenneth S. Raymond, Scientific Illustrator
August 10, 1970

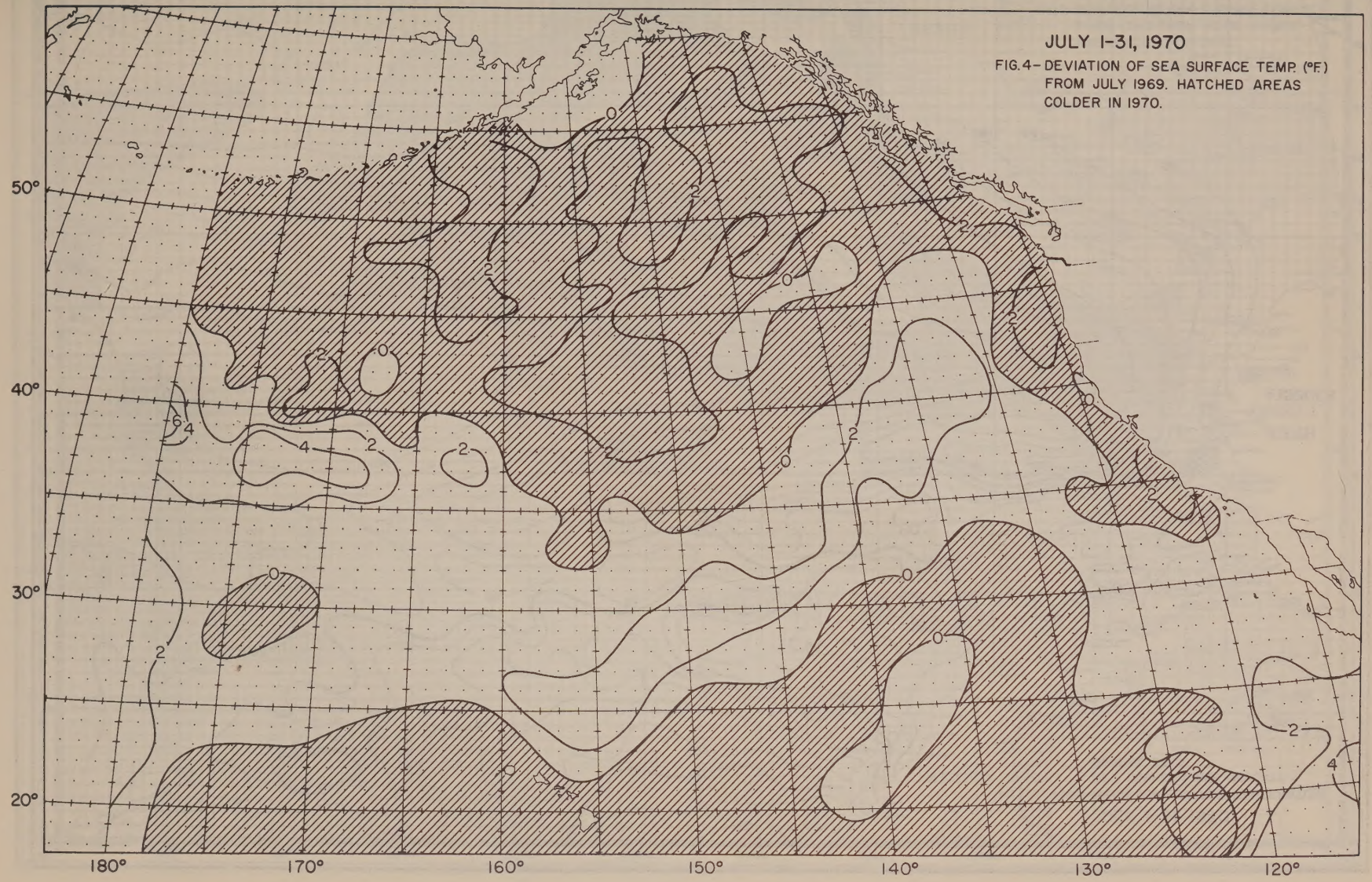

JULY 1-31, 1970
FIG. 1-MEAN SEA SURFACE TEMPERATURE (°F.)
50°
40°
30°
20°
180°
170°
160°
150°
140°
130°
120°
48
50
52
54
56
58
60
62
64
66
68
70
72
74
76
78
80
82
51
53
55
67
71

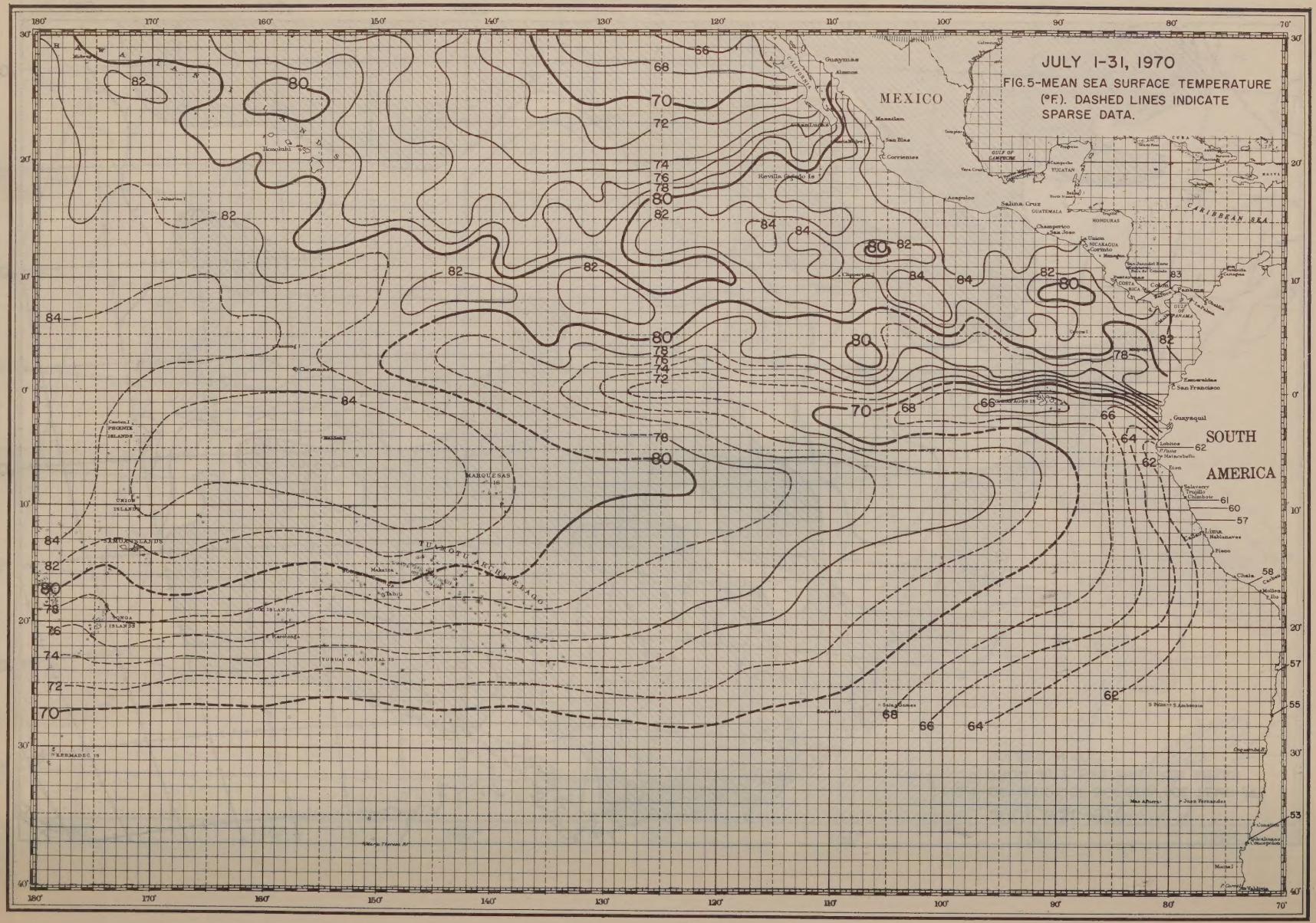
JULY 1-31, 1970

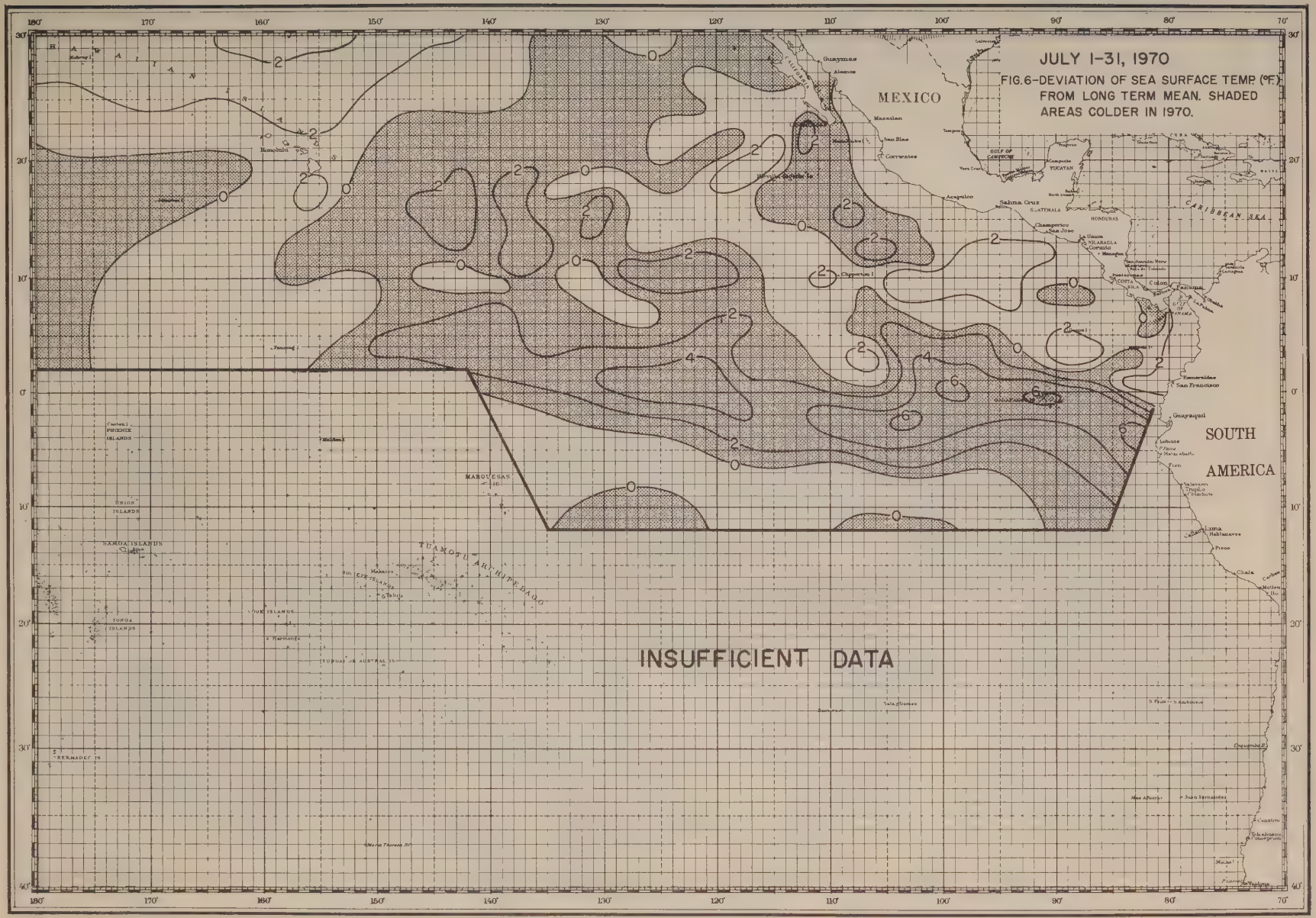
FIG. 2-MEAN SEA SURFACE TEMPERATURE (°F.)

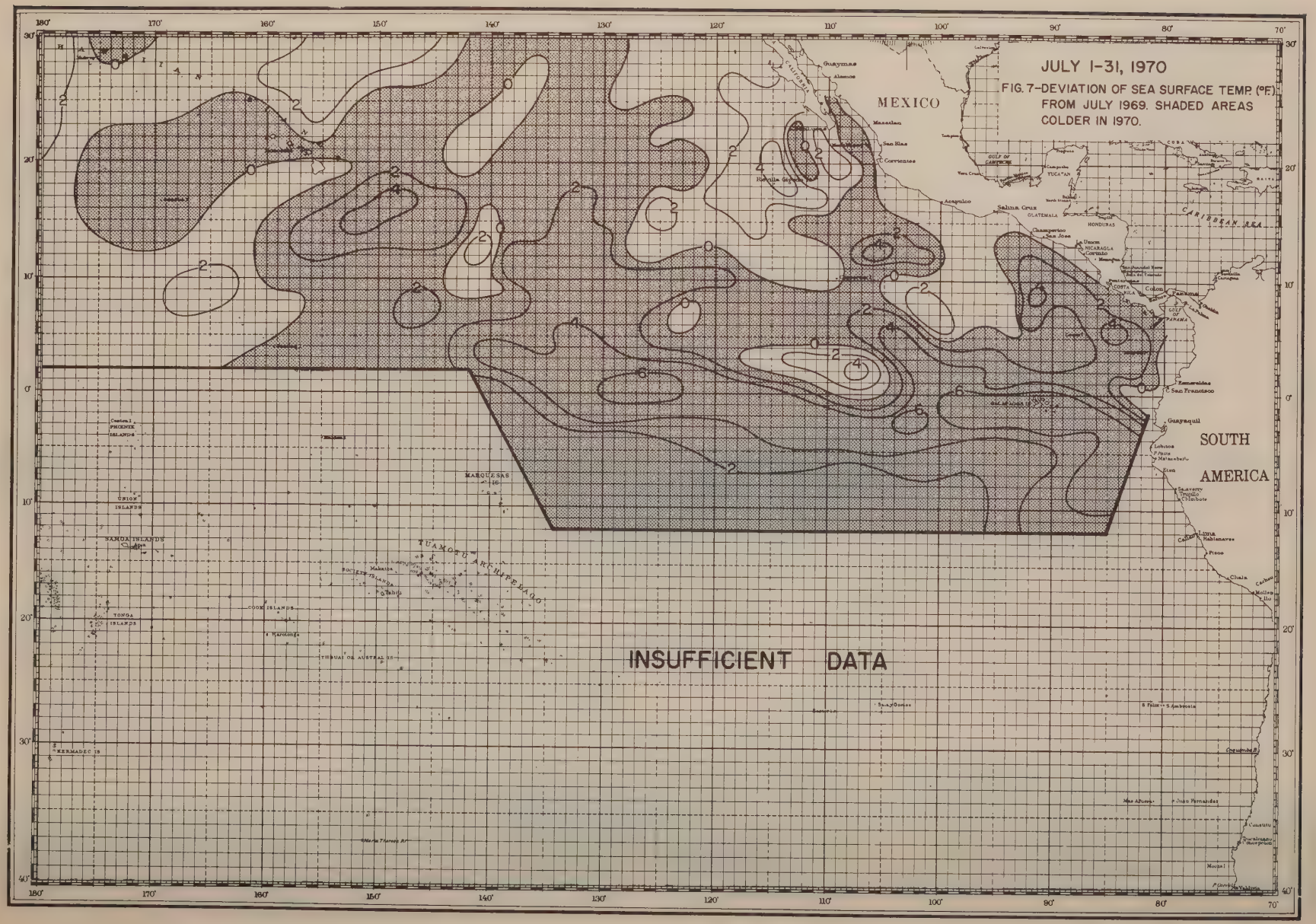


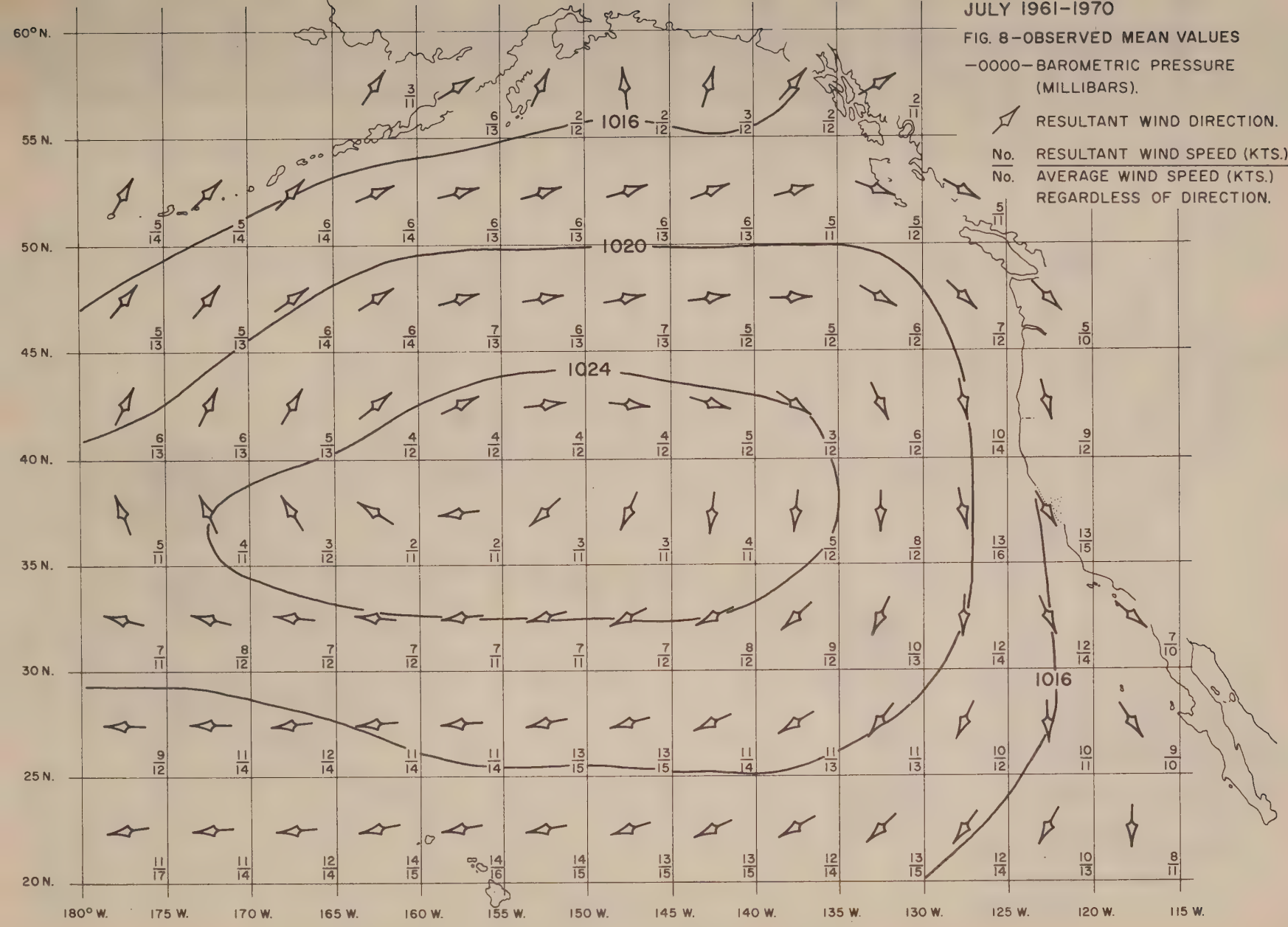

JULY 1-31, 1970
FIG. 3-DEVIATION OF SEA SURFACE TEMP. (°F.) FROM LONG TERM MEAN. HATCHED AREAS COLDER IN 1970.
50°
40°
30°
20°
180°
170°
160°
150°
140°
130°
120°
2
0
2
2
2
0
2
4
0
2
0
0
2
0

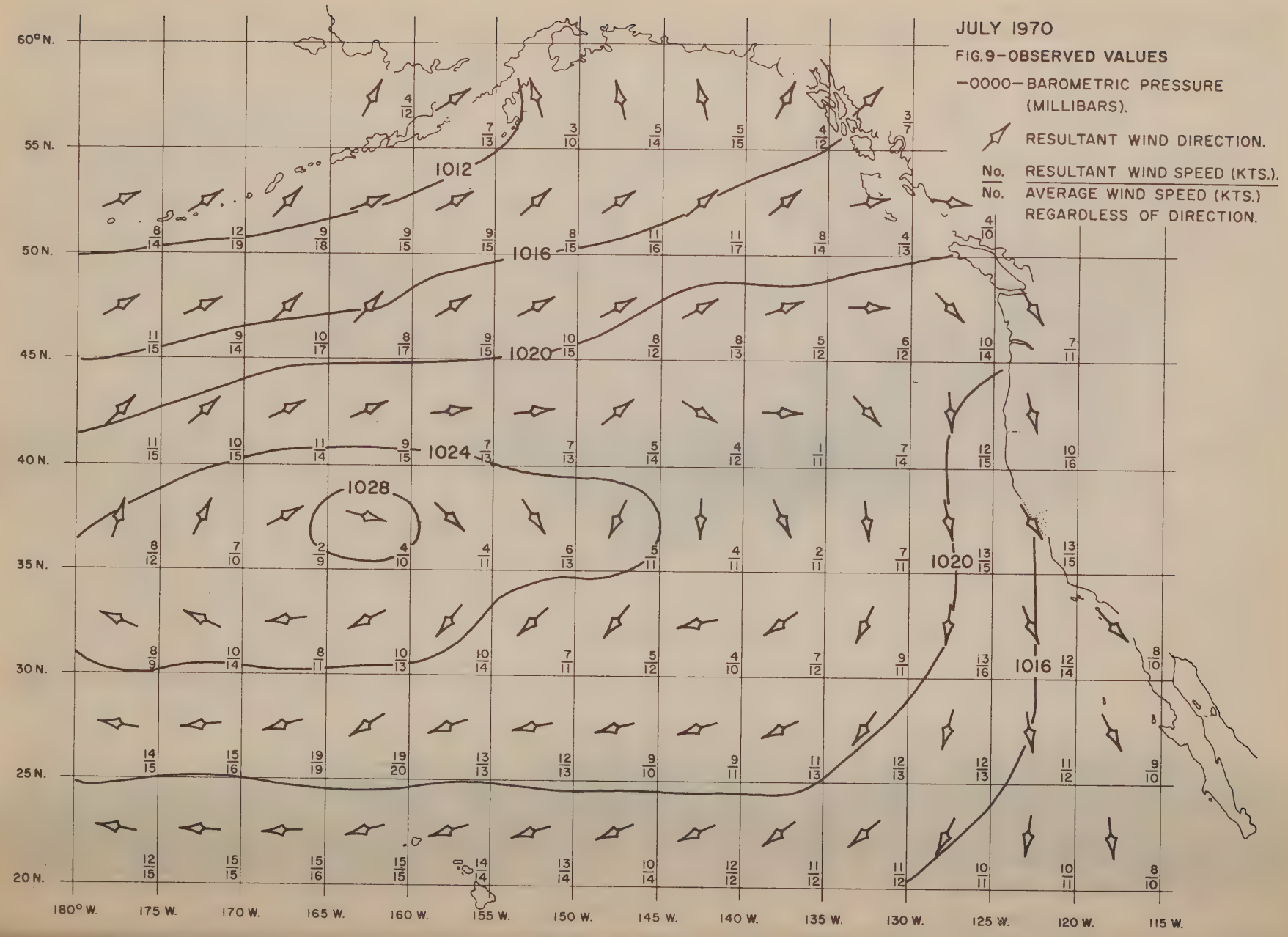

JULY 1-31, 1970
FIG. 4 - DEVIATION OF SEA SURFACE TEMP. (°F.) FROM JULY 1969. HATCHED AREAS COLDER IN 1970.
50°
40°
30°
20°
180°
170°
160°
150°
140°
130°
120°

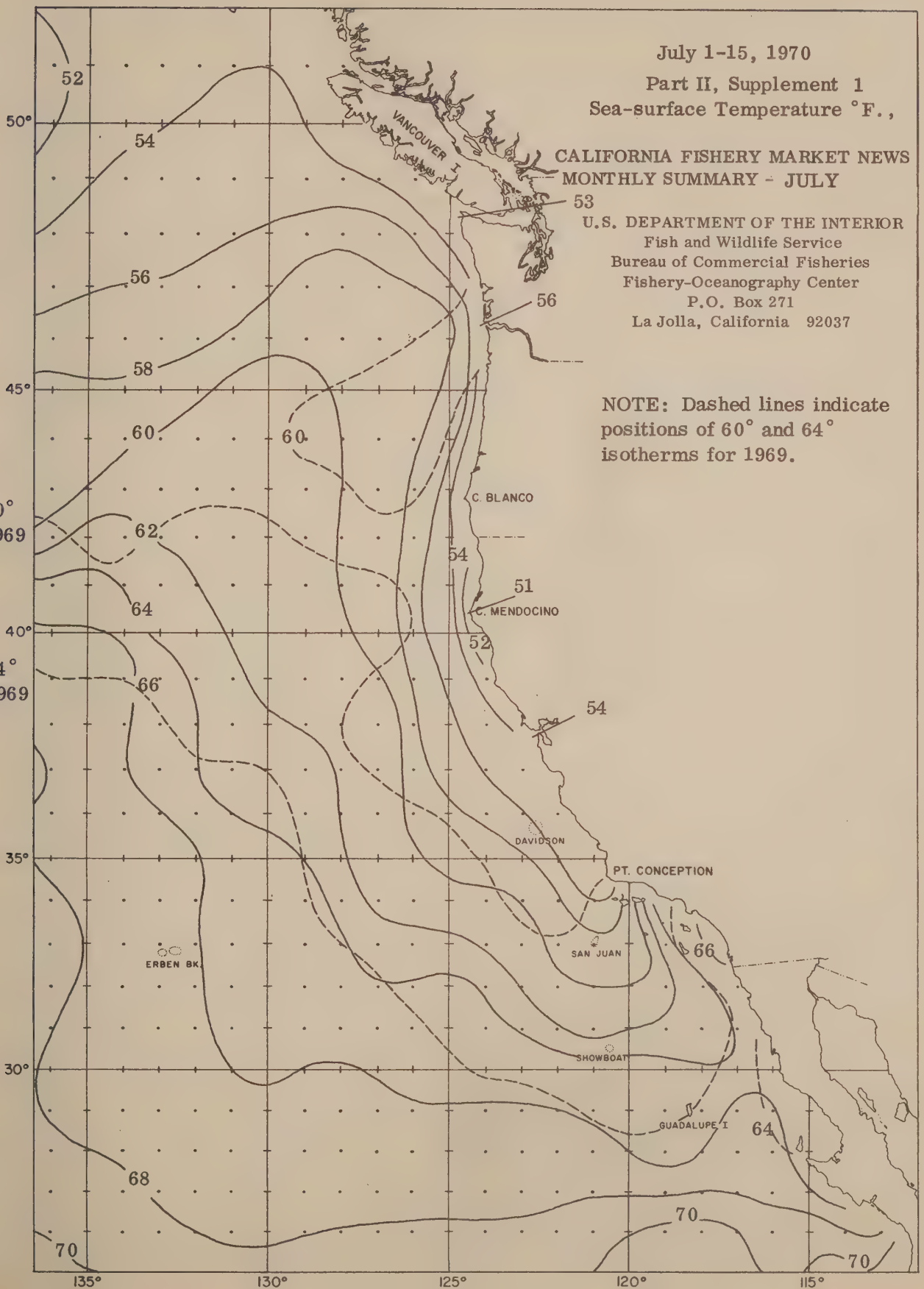

JULY 1-31, 1970
FIG. 5-MEAN SEA SURFACE TEMPERATURE (°F). DASHED LINES INDICATE SPARSE DATA.
MEXICO
SOUTH AMERICA
CARIBBEAN SEA
GUATEMALA
HONDURAS
NICARAGUA
COSTA RICA
PANAMA
CUBA
HAITI
JAMAICA
Guaymas
Mazatlan
San Blas
Corrientes
Acapulco
Salina Cruz
Champerico
La Union
Corinto
Guayaquil
Salaverry
Trujillo
Chimbote
Lima
Callao
Pisco
Chala
Mollendo
Arica
Iquique
Antofagasta
Valparaiso
Coquimbo
Talcahuano
Corral
Valdivia
Mocha I.
Juan Fernandez
Easter I.
Galapagos Is
Clipperton I.
Cocos I.
Malpelo I.
Gorgona I.
Gorgona
Tumaco
Esmeraldas
San Francisco
Lobitos
Talara
Paita
Pimentel
Chicama
Salinas
Ancon
Panama
Colon
Puntarenas
Corinto
Champerico
Salina Cruz
Acapulco
Manzanillo
Mazatlan
Guaymas
Magdalena Bay
Cedros I.
Guadalupe I.
Socorro I.
Clarion I.
Revilla Gigedo Is
Roca Partida
Johnston I.
Christmas I.
Canton I.
PHOENIX ISLANDS
Enderbury
Hawley
UNION ISLANDS
MARQUESAS IS.
TUAMOTU ARCHIPELAGO
Makatea
Tahiti
SOCIETY ISLANDS
TUBUAI OR AUSTRAL IS.
Rapa
Pitcairn I.
Henderson
KERMADEC IS.
Raoul I.
Macquarie I.
Norfolk I.
Auckland Is.
Campbell I.
HAWAIIAN ISLANDS
Midway Is.
Kauai
Oahu
Molokai
Maui
Hawaii
Kahoolawe
Niihau
Lehua
Kaula
Nihoa
Necker I.
French Frigate Shoals
Gardner Pinnacles
Maro Reef
Laysan I.
Lisianski I.
Pearl and Hermes Reef
Midway Is.
Kure I.
Johnston I.
Palmyra I.
Jarvis I.
Howland I.
Baker I.
Phoenix Is.
Line Is.
Fanning I.
Christmas I.
Tabuaeran
Malden I.
Starbuck I.
Flint I.
Vostok I.
Caroline I.
Ocean I.
Nauru
Gilbert Is.
Ellice Is.
Tokelau Is.
Samoa
Tutuila
Manua Is.
Rose I.
Swains I.
Fiji Is.
Suva
Lau Group
Rotuma
Tonga Is.
Nukualofa
Niue I.
Cook Is.
Rarotonga
Aitutaki
Manihiki
Penrhyn I.
Pukapuka
Nassau I.
Suwarrow I.
Palmerston I.
Niue I.
Tongareva
Manihiki
Rakahanga
Penrhyn I.
Pukapuka
Nassau I.
Suwarrow I.
Palmerston I.
Aitutaki
Rarotonga
Mangaia
Atiu
Mauke
Mitiaro
Manuae
Takutea
Tubuai
Rapa
Pitcairn I.
Henderson
Ducie I.
Oeno I.
Marcus I.
Macquarie I.
Norfolk I.
Auckland Is.
Campbell I.
Raoul I.
Kermadec Is.
Tasman Sea
Coral Sea
Solomon Sea
Bismarck Sea
Arafura Sea
Timor Sea
Java Sea
Celebes Sea
Sulu Sea
South China Sea
Philippine Sea
Mariana Is.
Guam
Saipan
Tinian
Rota
Yap
Palau Is.
Truk
Ponape
Kusaie
Marshall Is.
Wake I.
Johnston I.
Midway Is.
Kure I.
Hawaiian Is.
Aleutian Is.
Kamchatka
Japan
Ryukyu Is.
Taiwan
Philippines
Borneo
Sumatra
Java
Timor
New Guinea
Australia
New Zealand
Tasmania
Antarctica
Ross Sea
Weddell Sea
Drake Passage
Cape Horn
Falkland Is.
South Georgia
South Sandwich Is.
Bouvet I.
Prince Edward Is.
Crozet Is.
Kerguelen Is.
Heard I.
McDonald Is.
Macquarie I.
Auckland Is.
Campbell I.
Antipodes Is.
Bounty Is.
Chatham Is.
Kermadec Is.
Raoul I.
Norfolk I.
Lord Howe I.
Coral Sea
Tasman

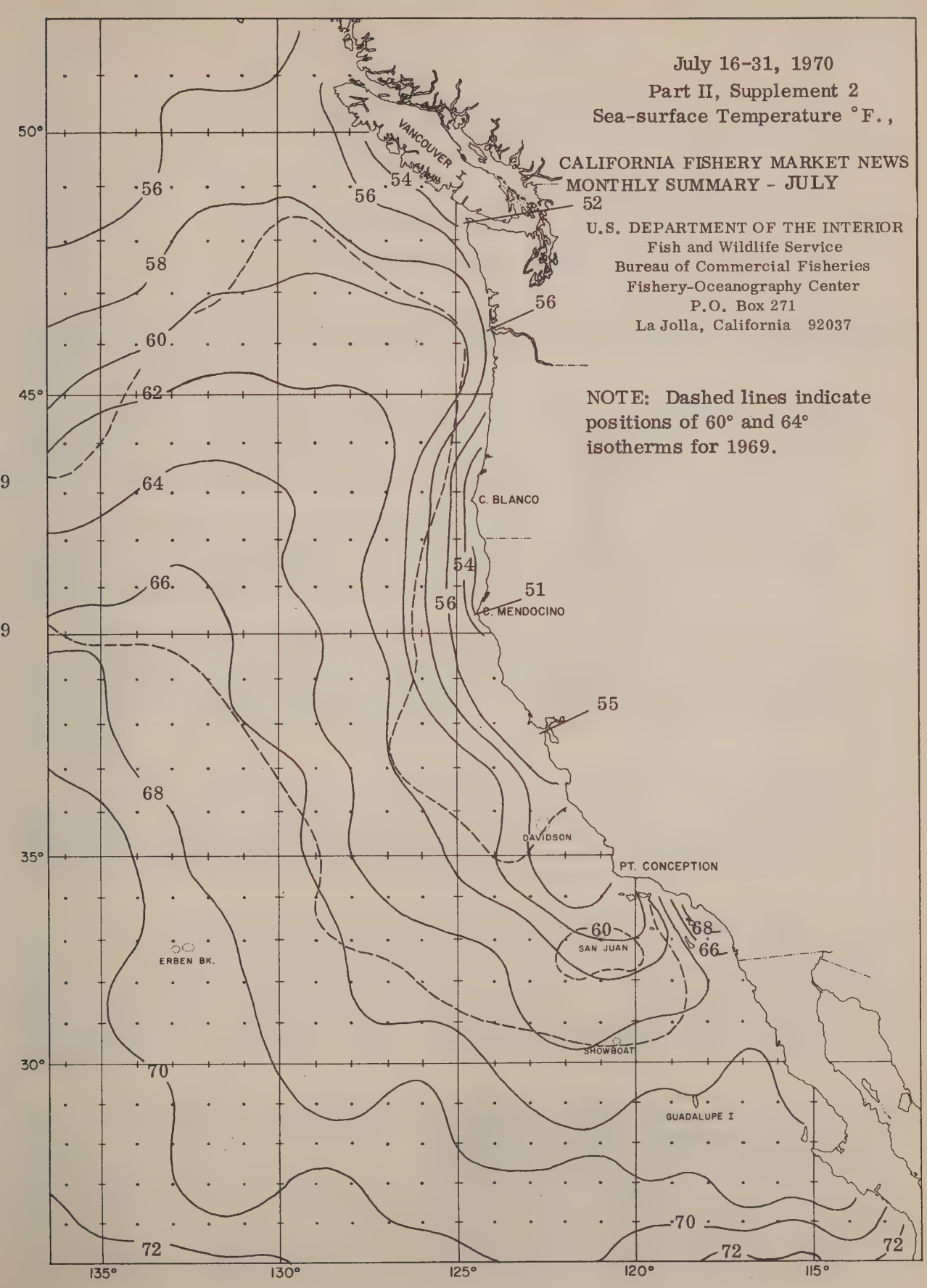

JULY 1–31, 1970
FIG.6–DEVIATION OF SEA SURFACE TEMP (°F.) FROM LONG TERM MEAN. SHADED AREAS COLDER IN 1970.
MEXICO
SOUTH AMERICA
CARIBBEAN SEA
INSUFFICIENT DATA
MARQUESAS
TUAMOTU ARCHIPELAGO
SAMOA ISLANDS
TONGA ISLANDS
PHOENIX ISLANDS
UNION ISLANDS
Honolulu
Acapulco
Salina Cruz
Guayaquil
Lima
Callao
Chala
Panama
Colon
Tahiti
Easter Island
Juan Fernandez Is.
Cocos Is.
Malpelo I.
Tumaco
Esmeraldas
San Francisco
Puerto Vallarta
Manzanillo
Mazatlan
Guaymas
Campeche
Progreso
Veracruz
Tampico
Galveston
Cuba
Haiti
Jamaica
Belize
Guatemala
Honduras
Costa Rica
Nicaragua
Gulf of Tehuantepec
Gulf of Panama
Gulf of Campeche
Yucatan
Chiperone I.
Clipperton I.
Revillagigedo Is.
Socorro I.
Roca Partida
Cocos I.
Malpelo I.
Galapagos Is.
Sala y Gomez
Ducie I.
Henderson I.
Oeno I.
Pitcairn I.
Gambier Is.
Rapa I.
Raivavae I.
Rurutu I.
Tubuai Is.
Austral Is.
Rarotonga
Aitutaki
Manihiki
Penrhyn I.
Rakahanga
Nassau I.
Suwarrow I.
Palmerston I.
Niue I.
Fiji Is.
Kermadec Is.
Norfolk I.
Lord Howe I.
Chesterfield Is.
Coral Sea Is.
Solomon Is.
New Hebrides
New Caledonia
Loyalty Is.
Santa Cruz Is.
Banks Is.
Torres Is.
Gilbert Is.
Ellice Is.
Marshall Is.
Caroline Is.
Mariana Is.
Wake I.
Midway Is.
Johnston I.
Line Is.
Phoenix Is.
Tokelau Is.
Union Is.
Samoa Is.
Tonga Is


JULY 1-31, 1970
FIG. 7-DEVIATION OF SEA SURFACE TEMP (°F) FROM JULY 1969. SHADED AREAS COLDER IN 1970.
INSUFFICIENT DATA
MEXICO
SOUTH AMERICA
CARIBBEAN SEA
TUAMOTU ARCHIPELAGO
MARQUESAS
SAMOA ISLANDS
COOK ISLANDS
TONGA ISLANDS
PHOENIX ISLANDS
UNION ISLANDS
180°
170°
160°
150°
140°
130°
120°
110°
100°
90°
80°
70°
30°
20°
10°
0°
10°
20°
30°
40°


JULY 1961-1970
FIG. 8-OBSERVED MEAN VALUES
-0000- BAROMETRIC PRESSURE (MILLIBARS).
RESULTANT WIND DIRECTION.
No. RESULTANT WIND SPEED (KTS.).
No. AVERAGE WIND SPEED (KTS.) REGARDLESS OF DIRECTION.
1016
1020
1024
1016
60° N.
55 N.
50 N.
45 N.
40 N.
35 N.
30 N.
25 N.
20 N.
180° W.
175 W.
170 W.
165 W.
160 W.
155 W.
150 W.
145 W.
140 W.
135 W.
130 W.
125 W.
120 W.
115 W.


JULY 1970
FIG. 9 - OBSERVED VALUES
—0000— BAROMETRIC PRESSURE (MILLIBARS).
RESULTANT WIND DIRECTION.
No. RESULTANT WIND SPEED (KTS.).
No. AVERAGE WIND SPEED (KTS.) REGARDLESS OF DIRECTION.
1012
1016
1020
1024
1028
1020
1016
60° N.
55 N.
50 N.
45 N.
40 N.
35 N.
30 N.
25 N.
20 N.
180° W.
175 W.
170 W.
165 W.
160 W.
155 W.
150 W.
145 W.
140 W.
135 W.
130 W.
125 W.
120 W.
115 W.


July 1-15, 1970
Part II, Supplement 1
Sea-surface Temperature °F.,
CALIFORNIA FISHERY MARKET NEWS
MONTHLY SUMMARY - JULY
U.S. DEPARTMENT OF THE INTERIOR
Fish and Wildlife Service
Bureau of Commercial Fisheries
Fishery-Oceanography Center
P.O. Box 271
La Jolla, California 92037
NOTE: Dashed lines indicate positions of 60° and 64° isotherms for 1969.
VANCOUVER I.
C. BLANCO
C. MENDOCINO
DAVIDSON
PT. CONCEPTION
SAN JUAN
SHOWBOAT
GUADALUPE I.
ERBEN BK.
52
54
56
58
60
62
64
66
68
70
53
51
50°
45°
40°
35°
30°
135°
130°
125°
120°
115°


July 16-31, 1970
Part II, Supplement 2
Sea-surface Temperature °F.,
CALIFORNIA FISHERY MARKET NEWS
MONTHLY SUMMARY - JULY
U.S. DEPARTMENT OF THE INTERIOR
Fish and Wildlife Service
Bureau of Commercial Fisheries
Fishery-Oceanography Center
P.O. Box 271
La Jolla, California 92037
NOTE: Dashed lines indicate positions of 60° and 64° isotherms for 1969.
VANCOUVER I.
C. BLANCO
C. MENDOCINO
DAVIDSON
PT. CONCEPTION
SAN JUAN
SHOWBOAT
ERBEN BK.
GUADALUPE I
50°
45°
35°
30°
135°
130°
125°
120°
115°
56
58
60
62
64
66
68
70
72
54
52
51
55

UNITED STATES DEPARTMENT OF THE INTERIOR
U.S. FISH AND WILDLIFE SERVICE
BUREAU OF COMMERCIAL FISHERIES
Fishery-Oceanography Center
La Jolla, California 92037

BULLETIN NO. 70-2

1970 ALBACORE SEASON DELAYED

The 1970 albacore tuna fishing season has not yet begun. The delay is mostly due to the fishermen-processors price negotiations, which are still not settled and which have prevented any scouting activities by the commercial fishing fleet. Many albacore boats are reported strategically located in northern ports awaiting a price settlement and the arrival of the albacore on the fishing grounds.

There has been extensive scouting by sportboats out of San Diego and Newport, California, in waters off southern California over local banks and in the vicinity of San Juan Seamount which has resulted in only scattered catches of albacore. Four albacore weighing 20-22 pounds were taken on July 8 on a course 240°, 170 miles out of San Diego. Two albacore were caught by a private yacht 40 miles south of San Juan Seamount and at least one albacore was reported taken by a commercial boat 60 miles south of San Juan Seamount during the first week of July.

The BCF research vessel DAVID STARR JORDAN completed her albacore scouting cruise on July 2 without additional catches beyond those reported in Bulletin 70-1 (June 30, 1970). The total catch for the cruise was 100 albacore. The bulk of the catch was taken 280 miles west of Monterey to 280 miles west of Fort Bragg in 60-61° F water. JORDAN is currently on a hake-anchovy survey in near-shore waters off northern California. She has been trolling jigs during daylight hours but the temperatures have been too cold for albacore.

No albacore were reported taken by F/V SUNRISE during her albacore survey of Oregon waters while on charter to the Oregon Fish Commission. The cruise, which departed Astoria on June 30, was terminated early because of strong winds, rough seas, and other difficulties. SUNRISE trolled lines and made XBT BATHY observations on a track due west of Astoria to longitude 127° W, southward to the Oregon-California border, and then shoreward on latitude 42° N. SUNRISE experienced 30 knot winds and 8-10 foot seas off Brookings and went into Coos Bay on July 5. She sailed from Coos Bay on July 8 in an attempt to complete her survey and returned to Astoria on July 10 without doing so.

No albacore catches have been reported by the Oregon State University research vessels YAQUINA and CAYUSE. These vessels have trolled for albacore incidentally to oceanographic studies when in Oregon waters warmer than 58° F. YAQUINA trolled four lines in 58° F water all day on July 8 about 100 miles off Tillamook Head. However, much of the oceanographic work by YAQUINA and CAYUSE since early July has been in waters near to shore and too cold for albacore. CAYUSE made a cruise between June 25 and July 2 which extended about 165 miles offshore between Newport and Brookings and fished in patches of 60° F water without success.

Near the end of her scouting cruise, between June 30 and July 2, the BCF R/V JORDAN traversed an extensive region off northern California and Oregon which had surface temperatures of 58.5-59.5° F. As this region warms, the 60° and 61° F isotherms, which are critical to the migration of albacore, will extend northward and shoreward. We have observed evidence of some continued warming during the first 2 weeks of July, but strong and persistent nearshore winds have kept the region near the coast north of 41° N cool by deep stirring, evaporation, and upwelling. Some localized spots of water exceeding 60° F have formed off central Oregon but as yet these are not connected to the main body of water warming farther offshore and to the south. Significant warming has occurred in the offshore areas west of San Francisco. Water temperatures are 2-3° warmer than last year in a region 150-300 miles off the coast between Morro Bay and Cape Mendocino.

The main weather feature during the first week of July was a weak low pressure center situated in the Gulf of Alaska accompanied by a pressure ridge extending northeastward over the Pacific Northwest. The winds associated with this system were moderate southwesterly far offshore and moderate southwesterly to northwesterly along the Washington and Oregon coasts. Off northern and central California the winds were moderate to strong from the northwest. Since July 7, the northeastern portion of the North Pacific High has extended over the eastern Gulf of Alaska and into western Canada, Washington and Oregon, resulting in strong north-northwesterly winds and moderate to heavy seas and swells along the Washington, Oregon, and northern California coasts. From Cape Mendocino to Point Conception the winds were light to moderate variable inshore becoming moderate northwesterly offshore. According to the Extended Forecast Division of the Weather Bureau, the persistent ridge of high pressure centered near 140° W and between 40-50° N is expected to weaken during the next 2 weeks. If this occurs the winds along the Washington and Oregon coasts should decrease allowing the upper mixed layer temperatures east of 127° W and north of 41° N to warm quickly to 60° F and above.

Based on JORDAN's albacore catches earlier this month, current sea surface temperatures and the depth of the mixed layer, it appears that the area 150-300 miles off San Francisco holds albacore now. Albacore should be available in commercial concentrations in the region about 150 miles offshore between Pt. Arena and Cape Blanco as soon as this region warms to 60° F which is expected within the next few days.

The Western Fishboat Owners Association plans to open an office about July 20 in Astoria during the albacore season. The office will have a SSB radio for communication with albacore vessels. WFBOA will also broadcast the daily albacore fishery information advisory, prepared jointly by BCF and Oregon State University, on 8284.4 kHz; the broadcast time is not established, but will be sometime after 1800 PDT.

For more detailed albacore information off the Oregon coast please see Oregon State University Albacore Central Fish Bulletins 70-C and 70-D. These materials should be available through most of the same outlets as the BCF Fish Bulletins.

July 15, 1970

Staff, Fishery-Oceanography Group
R. Michael Laurs, Leader

SPECIAL ANNOUNCEMENT

Western Fishboat Owners Association announced a price settlement on the afternoon of July 15. The contract is as follows:

$550.00 per ton delivered to canneries
25.00 per ton less at Newport, Oregon
35.00 per ton less at Coos Bay, Oregon
50.00 per ton less at Crescent City to San Francisco
40.00 per ton less at Moss Landing to Avila.

UNITED STATES DEPARTMENT OF THE INTERIOR
U.S. FISH AND WILDLIFE SERVICE
BUREAU OF COMMERCIAL FISHERIES
Fishery-Oceanography Center
La Jolla, California 92037

BULLETIN NO. 70-3

HIGH ALBACORE SCORES POSTED IN PACIFIC NORTHWEST

The albacore price settlement was reached on July 15, and the season got off to a fast start. The highest fishing scores since 1967 are being posted in the Pacific Northwest. Good fishing developed quickly in the Eureka to Crescent City area with smaller catches taken off the central Oregon coast. On July 16, 298 albacore were reported taken by a boat fishing about 80 miles off Redding Rock. By the weekend of July 18-19, there were reports of boats catching 500-750 albacore per day with most other boats catching 200-400 fish per day 80-90 miles offshore just north of Eureka. However, good fishing in this area lasted only a few days as high winds and sloppy seas reduced fishing activity and by July 20, the fishery moved to the north. There were reports of good fishing scattered along the Oregon coast but the main activity between July 20-30 centered about 120-170 miles offshore between Coos Bay and Florence, Oregon, with jig boat scores up to 1200 fish per day. By July 24, excellent fishing was reported in the area about 100-130 miles offshore between Newport and the Columbia River with average scores of 350-400 fish per day. Some boats reported as many as 900-1000 albacore in one day's fishing off Newport, and one jig boat picked up 1300 fish in one day of fishing off the Columbia River. During the last week of July, the best fishing along the entire U.S. West Coast was in the region between the Dumping Grounds off the Columbia River and the compass rose off Willapa Bay. Many boats caught 500-600 fish per day from this region and again highs of over 1200 fish were reported.

Not since 1967 have such consistent high scores been reported off Oregon, and fish landings are at a record rate, however, there have been no delays in unloading. Although this season started 15 days later than last year, the landings for this year are well over double of what they were last year. One thousand four hundred and fifty six tons were landed last year during July in Oregon, but this year Oregon landings for July should be between 3000 and 3500 tons. This year there were early albacore landings made in Coos Bay, however the bulk of the fish have been landed in Astoria.

California landings for July will be about 80 tons, which is slightly less than last year. Most of the California landings were made in Eureka, about 65 tons, and only about 12 tons have been landed in southern California. Catches off southern California have failed to meet even last year's low. During the last week of July there were reports of a large school of albacore sighted about 150 miles west of San Francisco, and some fish were caught at the 1908 fathom spot off Point Arguello where a small fleet is still fishing as weather permits. These regions could yield fish that will boost the California landings somewhat in August.

The size of the fish in the early Oregon landings was small, averaging about 11-1/2 pounds with many 9 pound fish. However, the fish size has gradually increased, and fish landed during the last week in July have averaged about 17 pounds, bringing the overall July average up to about 14 pounds this year.

The majority of the fish have been caught in 60° F water or warmer, but some large catches at the start of the season and lately north of the Columbia River have come from 59° F water.

In the Pacific Northwest during the last 15-day period the 60° isotherm has made a large sweep northward and shoreward and by the last week in July favorable albacore water was a short run from most Oregon and southern Washington ports. North of Cape Mendocino the temperature pattern is similar to last year and close to normal. However, the waters off Vancouver Island are on the average about 2° F cooler than this same time last year. Also the offshore area between about 35-45° N west of about longitude 129° W is about 3° F warmer than last year. The slightly cooler than normal temperature in the coastal band from Cape Blanco south, indicates upwelling to be somewhat greater than normal. The area between the 60 and 64° F isotherms in the Pacific Northwest waters appears to be reduced from what it was last year. Thus, water most favorable to albacore is compressed in a narrow band which seldom occurs this early.

Prior to July 15, strong north-northwesterly winds and heavy seas prevailed along the Washington, Oregon, and northern California coasts. However, between July 15 and 18, the pressure gradient over the coast from the Columbia River to Cape Mendocino decreased and several weak frontal systems passed over Washington and Oregon during this period causing the strong northwest winds to decrease and shift to the southwest. This decrease and shift allowed the sea surface temperature to warm to 60° F and above east of 128° W along the Oregon and northern California coasts. Between July 19 and 23, there were moderate northwest winds inshore from the Columbia River to Cape Blanco and strong winds with rough seas from Cape Blanco to Point Conception. However, the fishing districts were outside those windy areas and were generally unaffected by these conditions. On July 24, a low pressure system moved into the Gulf of Alaska with resultant frontal passages and a shifting of winds from northwest to southwest offshore the Pacific Northwest. Strong winds to 35 knots and moderate to heavy seas prevailed from Cape Blanco south to Point Conception. From July 27-31, a large high pressure system dominated the eastern North Pacific weather pattern.

This system, in conjunction with a relatively weak thermal trough over inland desert and valley regions, resulted in decreased pressure gradients off the U.S. West Coast. During this period winds were light variable from the Columbia River to Cape Mendocino and moderate northwesterly with moderate seas from Cape Mendocino to Point Conception. These conditions were quite favorable for good fishing off the Oregon coast and allowed a few boats to operate off central California south to Point Arguello (some small catches made as close to shore as 35 miles off Monterey).

The Extended Forecast Division of the Weather Bureau expects a weak upper level trough to develop off the Pacific Northwest during the next 15 days resulting in more frequent passage of weather fronts through this region. During these frontal passages, winds will be moderate 10-20 knots from the west and southwest with moderate to heavy seas. Surface layer temperatures are expected to warm slightly in offshore areas. Winds from Cape Blanco to Point Conception should be predominantly from the north-northwest at 15-25 knots; however, periods of decreased pressure gradients and winds, similar to that of July 28-30, are likely to occur and allow favorable fishing conditions south of Cape Mendocino.

The center of fishing activity for the next 15-days is expected to remain near the Columbia River and perhaps slightly to the north. There are no apparent indications that fishing activity should drop from what it has been for the past week or so. However, the passage of weather fronts forecasted for the next 15 days off the Pacific Northwest could result in moderate to high winds which could limit fishing activity. The area off central California between Monterey and Point Arguello warrants scouting if winds slack off.

For more detailed albacore information off the Oregon coast please see Oregon State University Albacore Central Fish Bulletins 70-E and 70-F. These materials should be available through most of the same outlets as the BCF Fish Bulletins.

July 31, 1970

Staff, Fishery-Oceanography Group
R. Michael Laurs, Leader

fishing-information 1970-08

2025-12-10

Box: IA41726711
Old Pallet: IA417267

California fishery market news monthly summary. Part II, Fishing information 1970-08

INTERNET ARCHIVE

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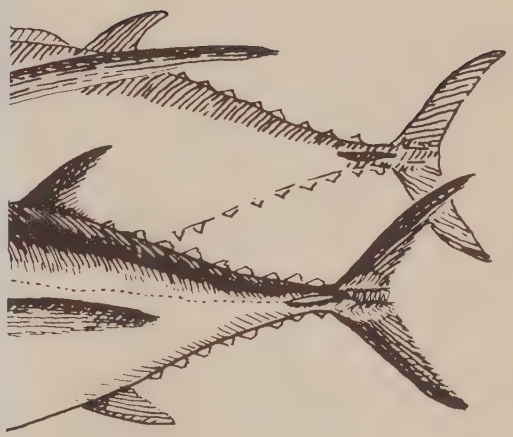

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UNITED STATES DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE
BUREAU OF COMMERCIAL FISHERIES
FISHERY-OCEANOGRAPHY CENTER
LA JOLLA, CALIFORNIA

SEA SURFACE TEMPERATURE CHARTS, EASTERN PACIFIC OCEAN
AUGUST 1970

Acknowledgements

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Environmental Science Services Administration
U. S. Weather Bureau, San Diego, California
U. S. Coast and Geodetic Survey, Pacific Marine Center, Seattle, Washington
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Hopkins Marine Station, Pacific Grove, California, J. P. Balesteri
Instituto Hidrografico de la Armada, Valparaiso, Chile
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Kelco Company, San Diego, California
Living Marine Resources Inc., San Diego, California
Oregon State University, Department of Oceanography, Corvallis, Oregon
Pacific Missile Range, Range Operations Department, Geophysics Division, Point Mugu, California
Scripps Institution of Oceanography, La Jolla, California, by Margaret Robinson
Scripps Institution of Oceanography Research Vessels ALEXANDER AGASSIZ, THOMAS WASHINGTON, FLIP, MELVILLE, ALPHA HELIX, OCONOSTOTA
University of Washington, Seattle, Washington; R/V THOMAS THOMPSON
Fishing Vessels CONNIE JEAN, CRUSADER
Pacific Environment Institute, West Vancouver, British Columbia, by H. J. Hollister from observations by G. C. Wilks at Langara Island Light; M. A. Fisher at Cape St. James Light; Lily Collins at Kains Island Lightstation; O. A. Edwards at Amphitrite Point Light

Charts

Figure 1.--Mean sea surface temperature, eastern north Pacific Ocean. Squares show temperatures at weather ship stations. Numerals on shore are temperatures at coastal and lightship stations.

Figure 2.--Mean sea surface temperature chart, western north Pacific Ocean. Squares show temperatures at weather ship stations. Numerals on shore are temperatures at coastal and lightship stations.

Figure 3.--Deviation of sea surface temperatures, eastern north Pacific Ocean from long term charts of H.O. 225. Hatched areas are colder in 1970.

Figure 4.--Deviation of sea surface temperatures, eastern north Pacific Ocean from those of August 1969. Hatched areas are colder in 1970.

Figure 5.--Mean sea surface temperature, eastern tropical Pacific Ocean. Numerals on shore are temperatures at coastal stations.

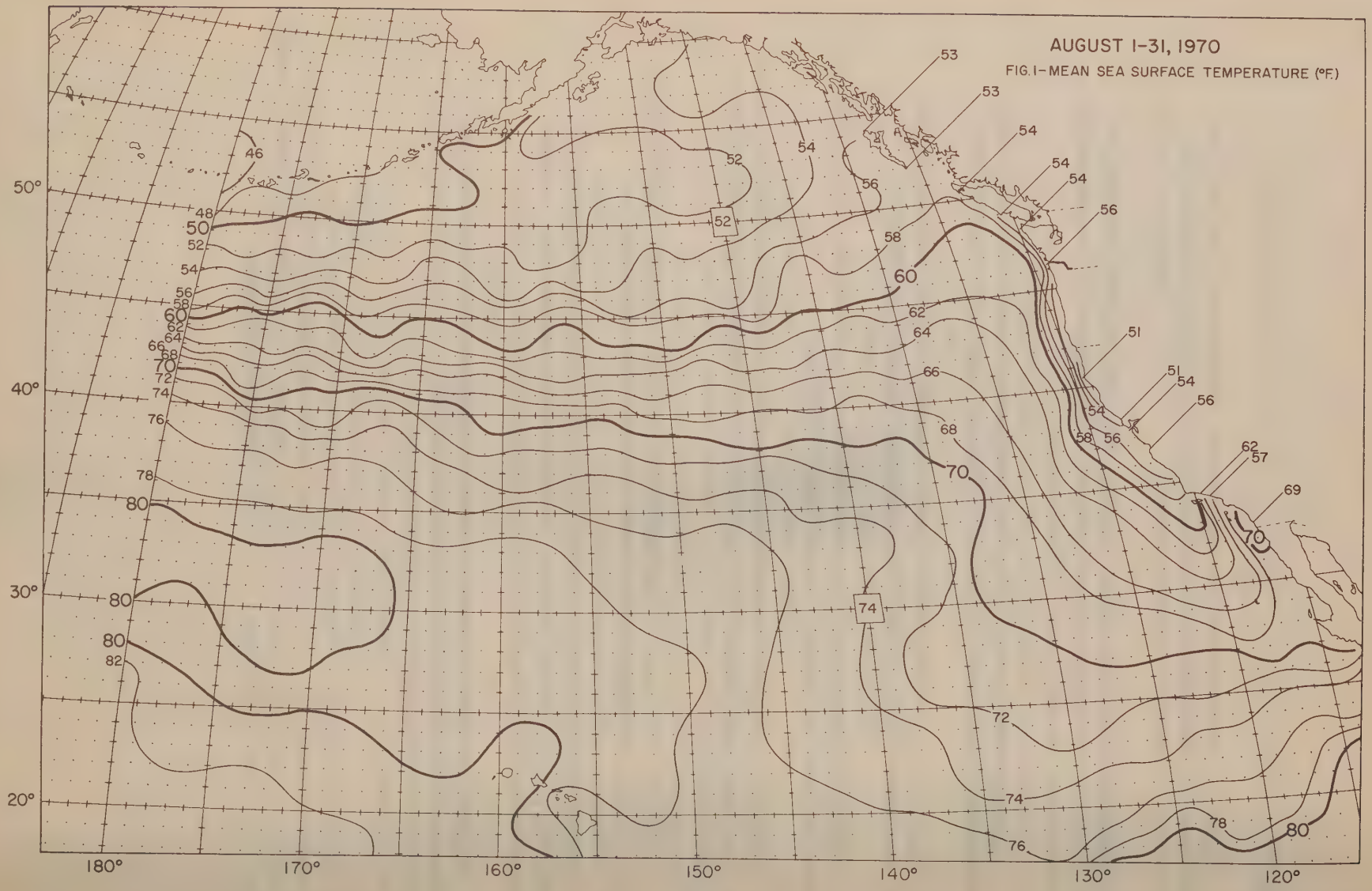
Figure 6.--Deviation of sea surface temperatures, eastern tropical Pacific Ocean from long term charts of H.O. 225 and NAVOCEANO sp-123. Shaded areas are colder in 1970.

Figure 7.--Deviation of sea surface temperatures, eastern tropical Pacific Ocean from those of August 1969. Shaded areas are colder in 1970.

Figure 8.--10-year mean (1961-1970) observed sea level values of barometric pressure (millibars), resultant wind direction (degrees true), resultant wind speed (knots), and average wind speed (knots) regardless of direction.

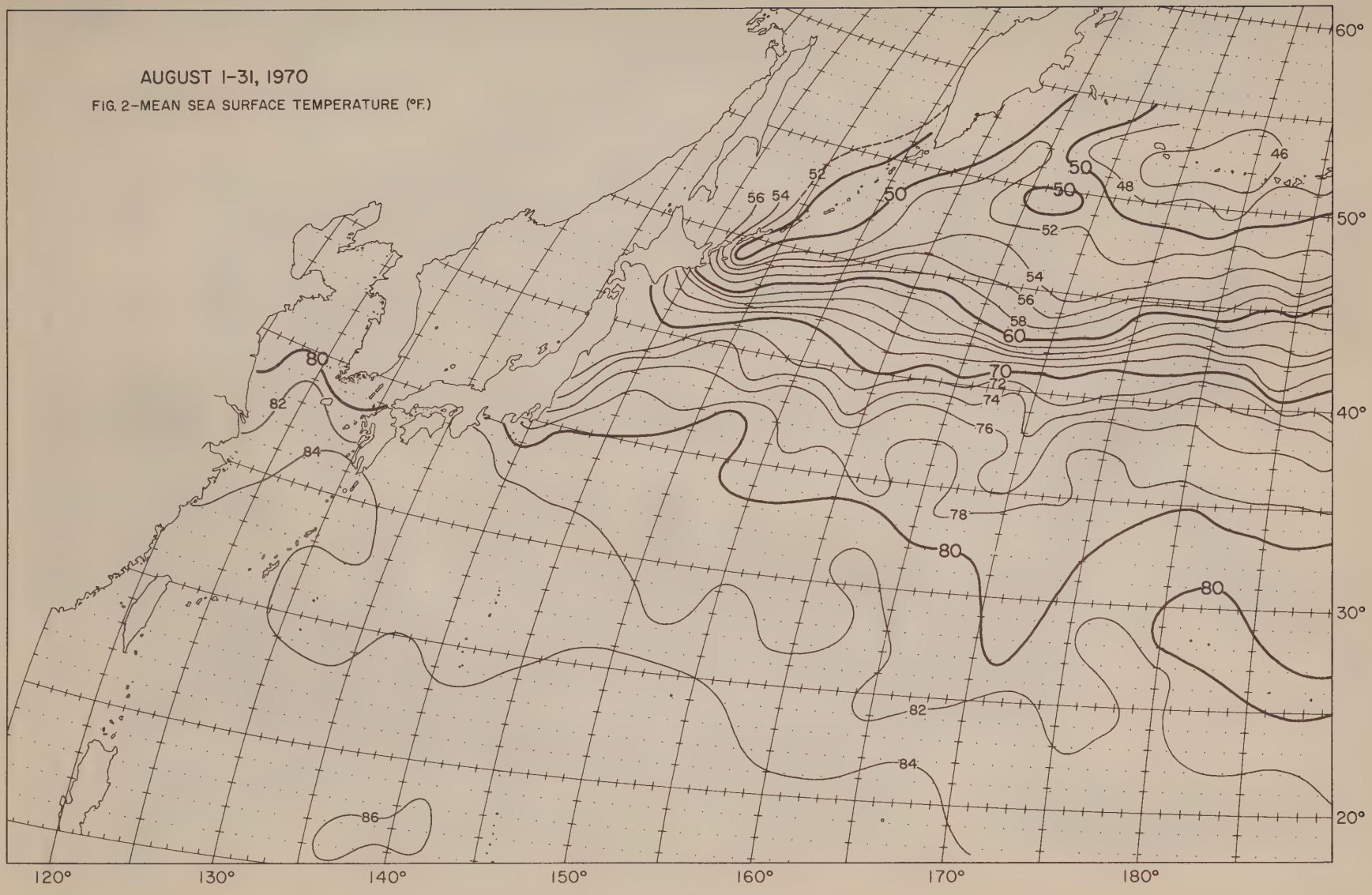
Figure 9.--Observed sea level values of barometric pressure (millibars), resultant wind direction (degrees true), resultant wind speed (knots), and average wind speed (knots) regardless of direction.

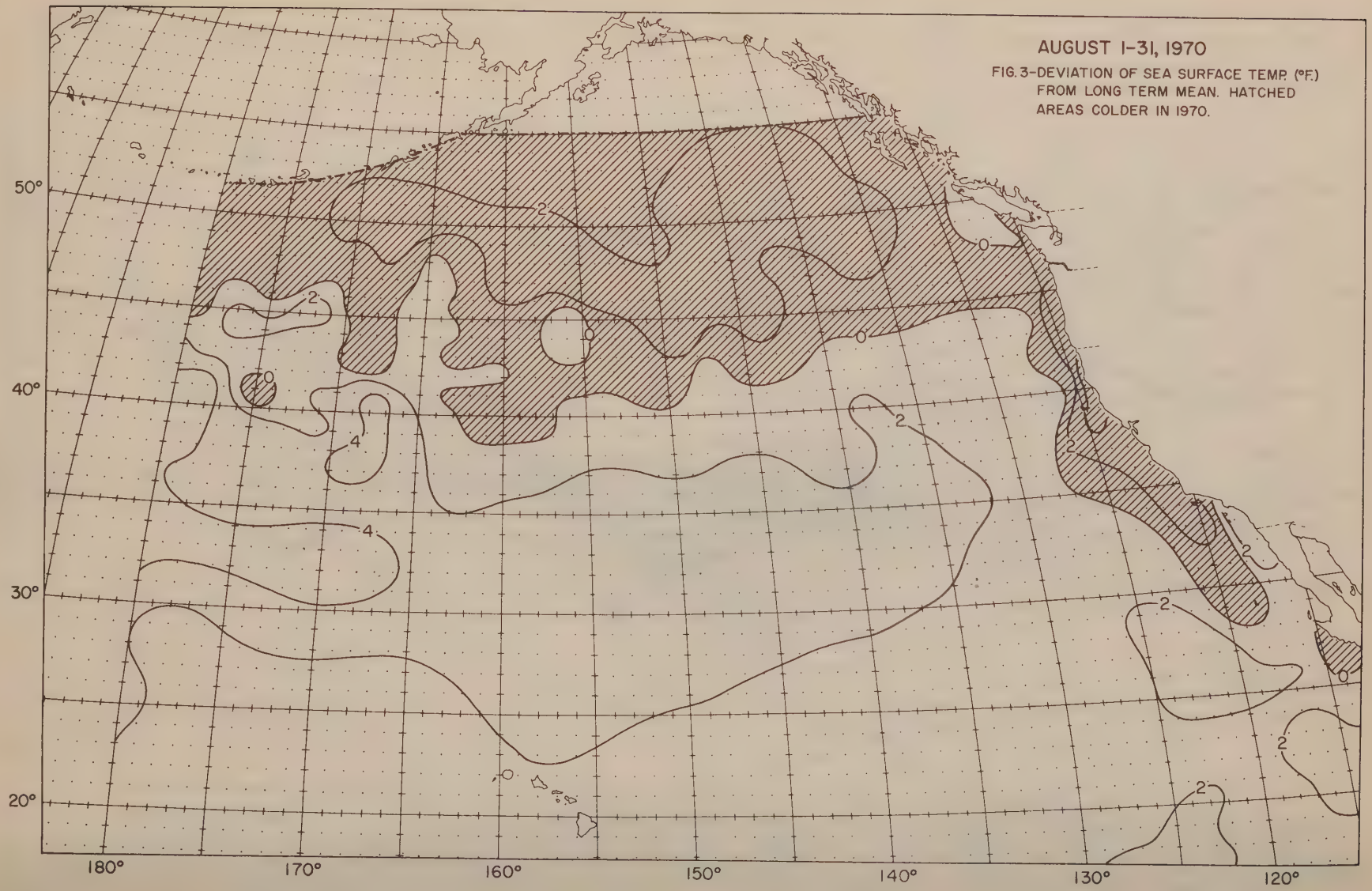
James A. Renner, Fishery Biologist
Kenneth S. Raymond, Scientific Illustrator
September 9, 1970

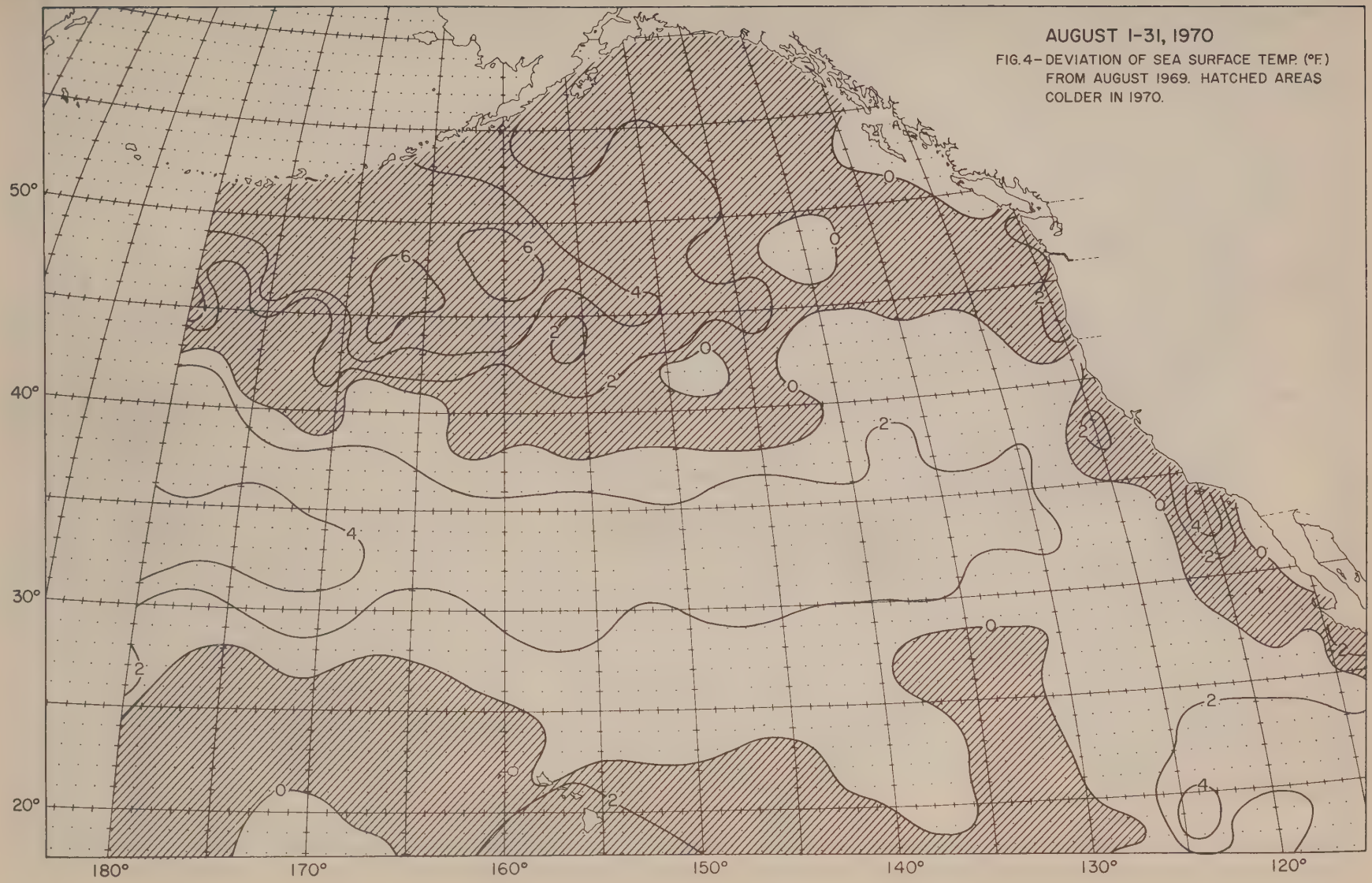

AUGUST 1-31, 1970
FIG. 1- MEAN SEA SURFACE TEMPERATURE (°F.)
50°
40°
30°
20°
180°
170°
160°
150°
140°
130°
120°

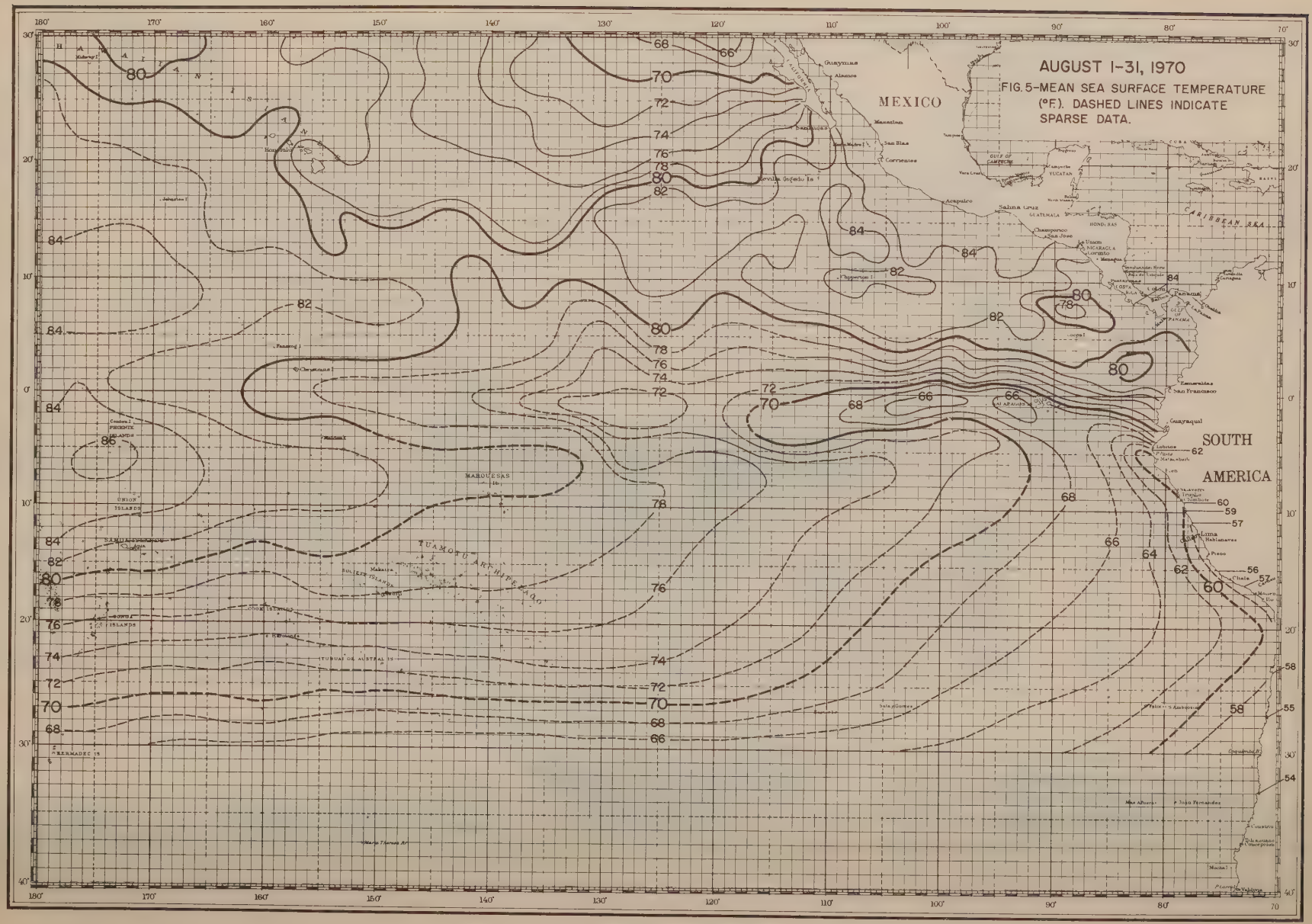
AUGUST 1-31, 1970

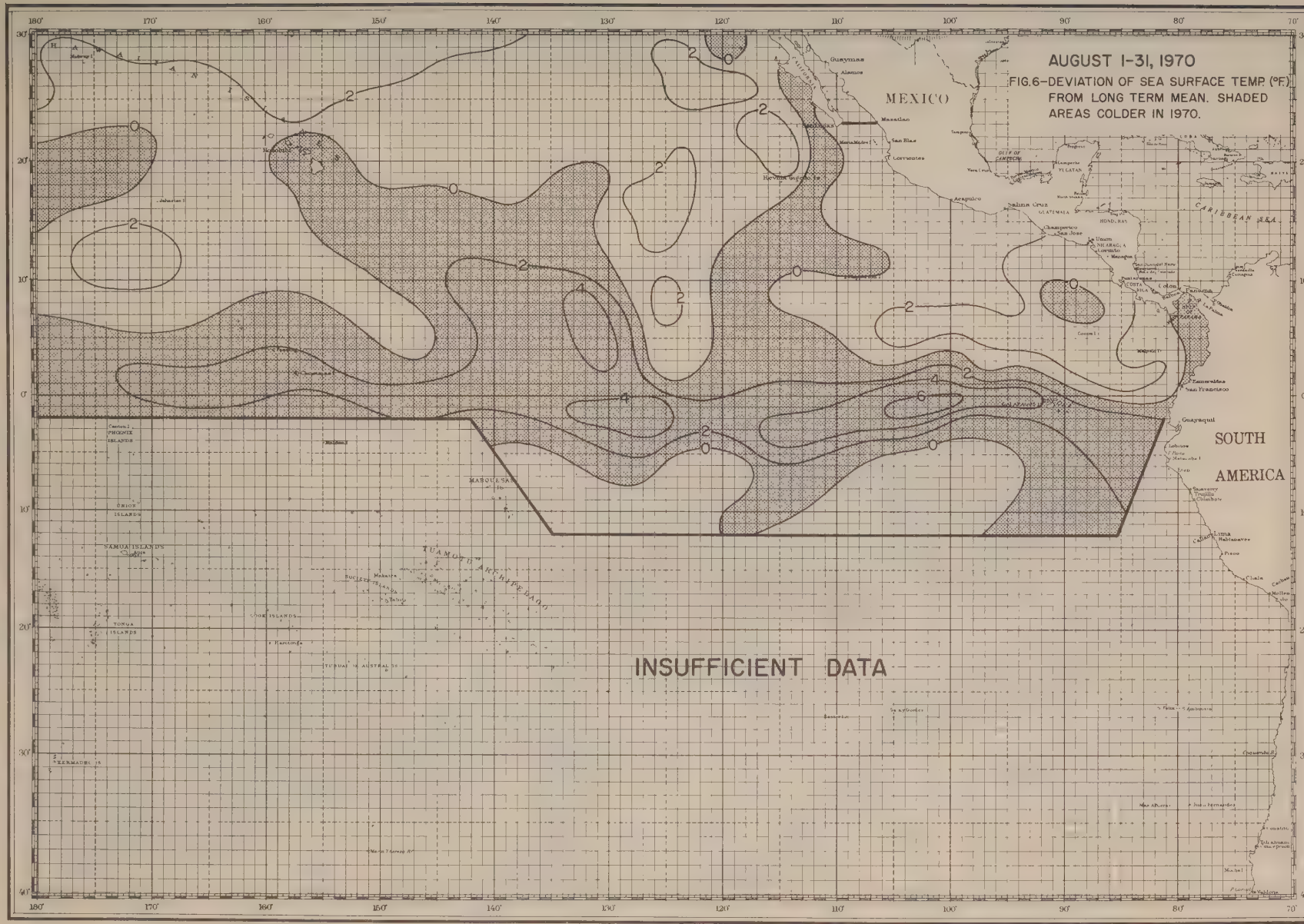
FIG. 2-MEAN SEA SURFACE TEMPERATURE (°F.)

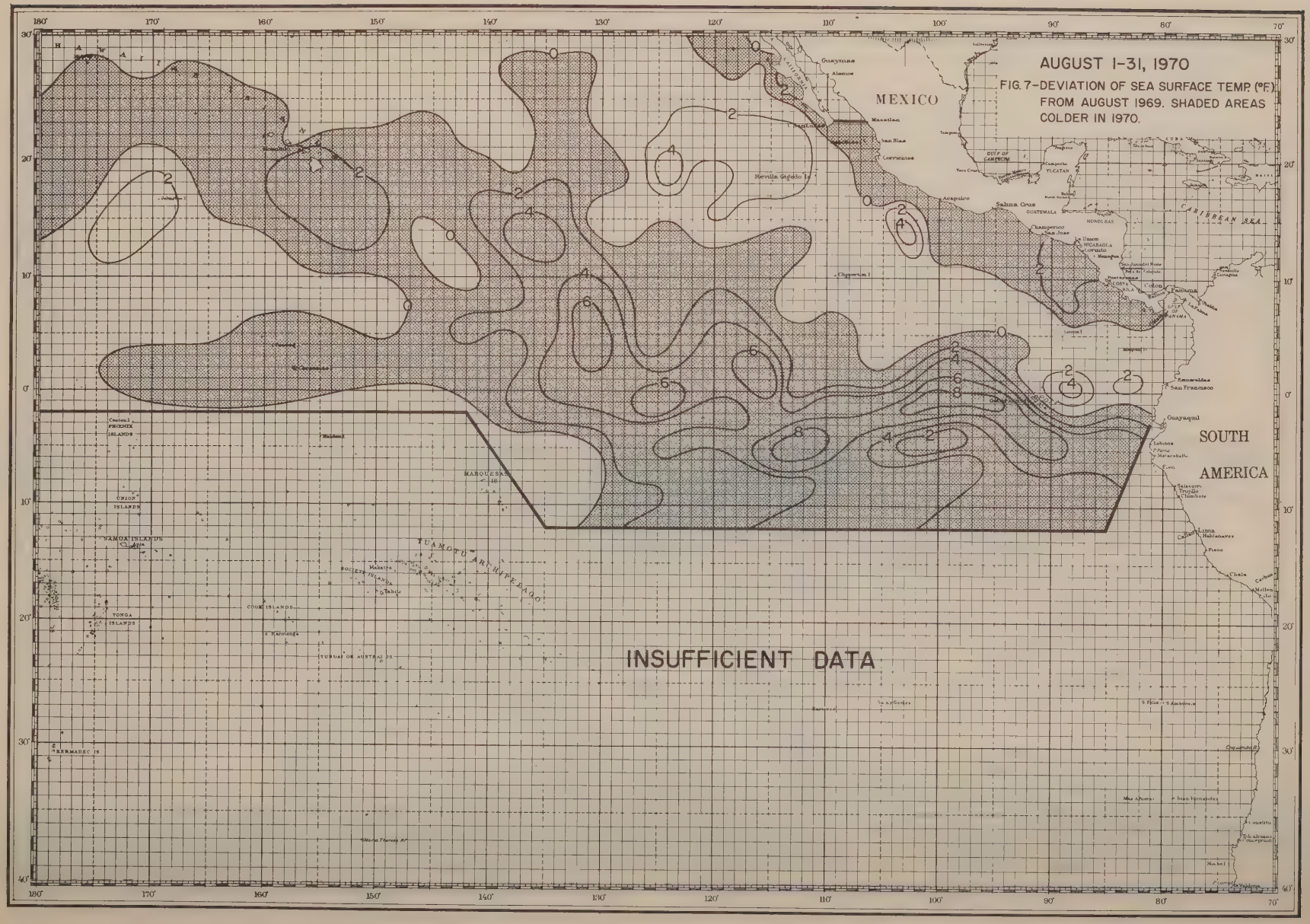


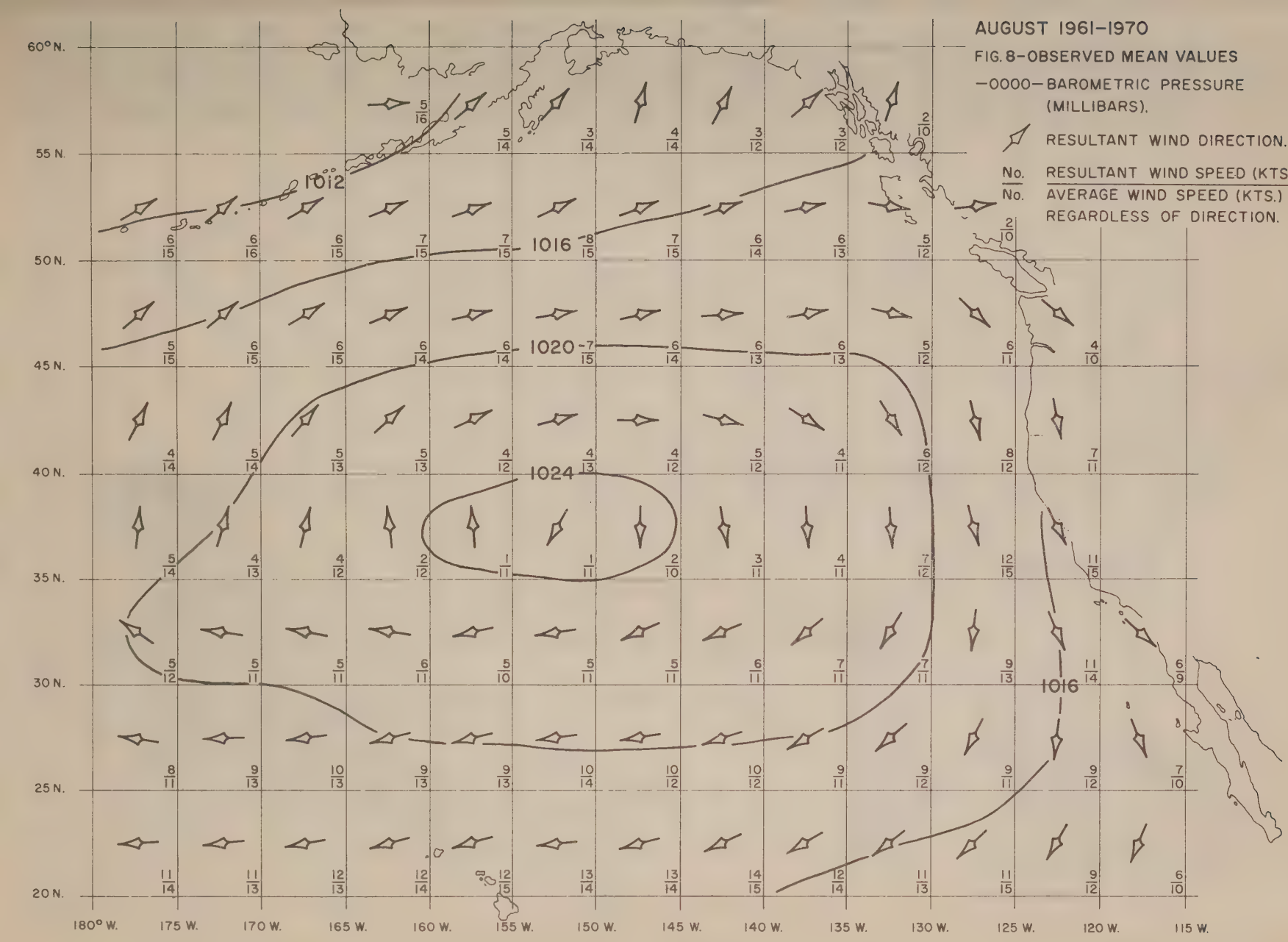

AUGUST 1-31, 1970
FIG. 3-DEVIATION OF SEA SURFACE TEMP. (°F.) FROM LONG TERM MEAN. HATCHED AREAS COLDER IN 1970.
50°
40°
30°
20°
180°
170°
160°
150°
140°
130°
120°
2
0
2
0
0
2
4
4
2
2
2
0
2
2

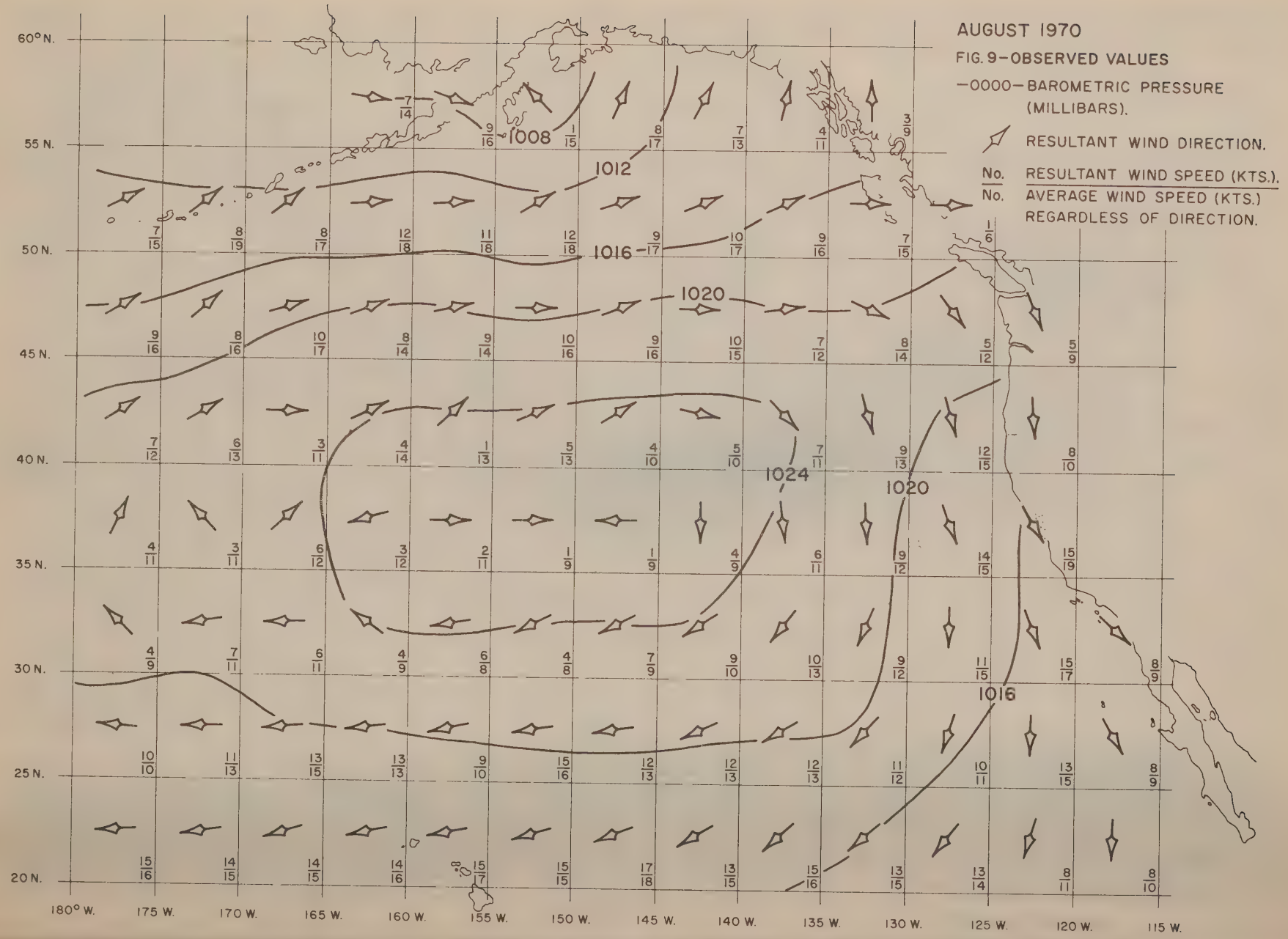

AUGUST 1-31, 1970
FIG. 4 – DEVIATION OF SEA SURFACE TEMP. (°F.) FROM AUGUST 1969. HATCHED AREAS COLDER IN 1970.
50°
40°
30°
20°
180°
170°
160°
150°
140°
130°
120°
6
6
4
2
0
0
0
2
2
4
0
2
0
4
2
0
2
0
2
2
4

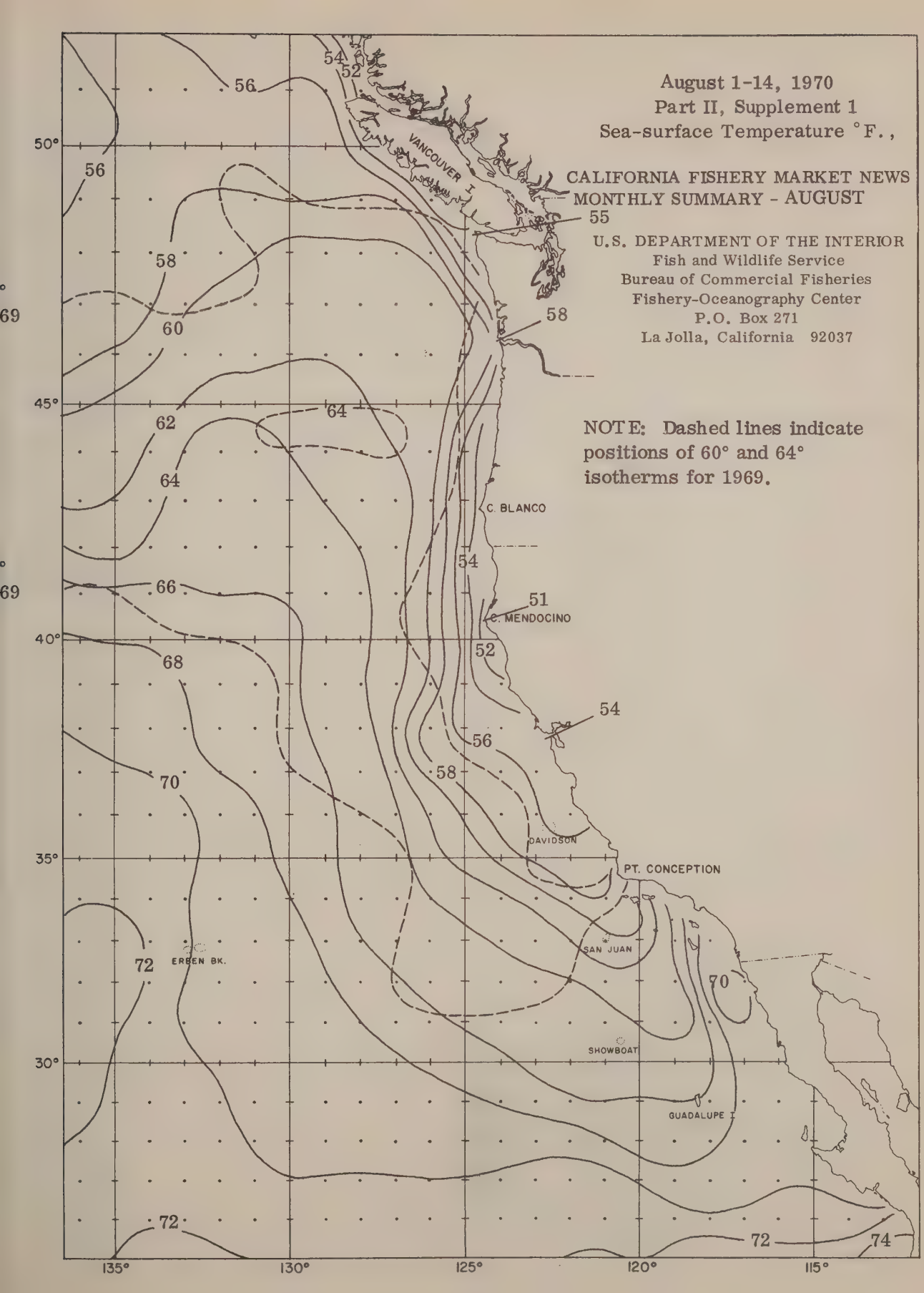

AUGUST 1-31, 1970
FIG. 5-MEAN SEA SURFACE TEMPERATURE (°F). DASHED LINES INDICATE SPARSE DATA.
MEXICO
SOUTH AMERICA
CARIBBEAN SEA
GUATEMALA
HONDURAS
NICARAGUA
PANAMA
COSTA RICA
CUBA
YUCATAN
GULF OF CAMPECHE
Guaymas
Mazatlan
San Blas
Corrientes
Acapulco
Salina Cruz
Champerico
San Jose
Managua
Panama
Guayaquil
Lima
Callao
Pisco
Chile
Valparaiso
Concepcion
MARQUESAS
TUAMOTU ARCHIPELAGO
SOCIETY ISLANDS
TUBUAI OR AUSTRAL IS.
PHOENIX ISLANDS
UNION ISLANDS
SAMOA
NORTH
180°
170°
160°
150°
140°
130°
120°
110°
100°
90°
80°
70°
30°
20°
10°
0°
40°

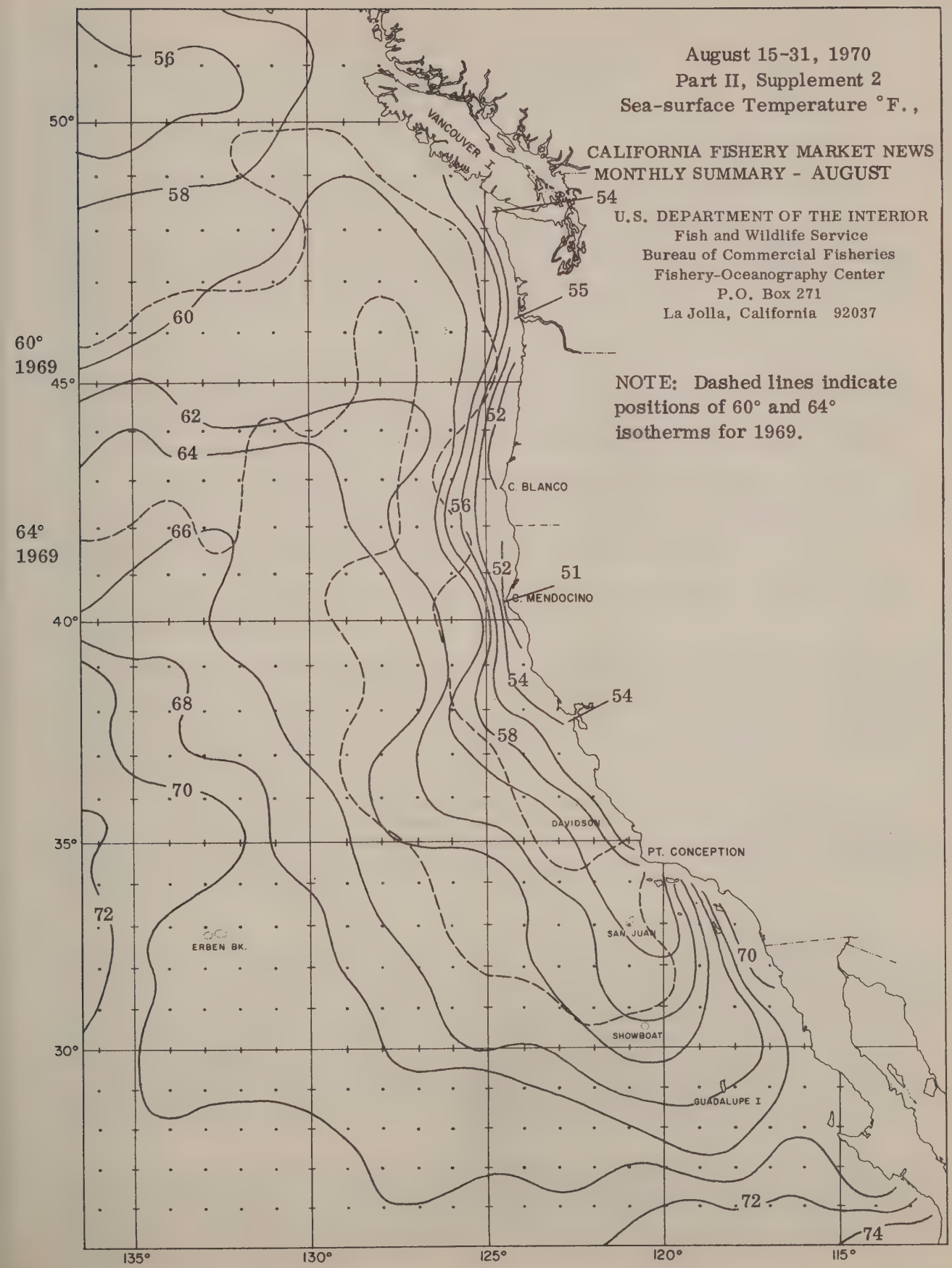

AUGUST 1-31, 1970
FIG.6-DEVIATION OF SEA SURFACE TEMP. (°F) FROM LONG TERM MEAN. SHADED AREAS COLDER IN 1970.
INSUFFICIENT DATA
MEXICO
SOUTH AMERICA
CARIBBEAN SEA
HAWAIIAN ISLANDS
PHOENIX ISLANDS
UNION ISLANDS
SAMOAN ISLANDS
TONGA ISLANDS
COOK ISLANDS
TUAMOTU ARCHIPELAGO
MARQUESAS
BERMUDAS
Guaymas
Mazatlan
San Blas
Acapulco
Salina Cruz
Champerico
Guayaquil
Callao
Lima
Paita
Chimbote
Trujillo
Pisco
Arica
Iquique
Antofagasta
Coquimbo
Valparaiso
Tumaco
Buenaventura
Cocos I.
Galapagos
Tehuantepec
Panama
Colon
Puntarenas
Corinto
Managua
Honduras
Guatemala
Yucatan
Veracruz
Tampico
Gulf of Mexico
Gulf of Panama
Gulf of Tehuantepec
Gulf of Fonseca
Gulf of Guayaquil
Gulf of Arica
Gulf of Penas
Gulf of Corcovado
Gulf of Ancud
Gulf of Arauco
Gulf of Valparaiso
Gulf of Coquimbo
Gulf of Antofagasta
Gulf of Iquique


AUGUST 1-31, 1970
FIG. 7-DEVIATION OF SEA SURFACE TEMP. (°F.) FROM AUGUST 1969. SHADED AREAS COLDER IN 1970.
INSUFFICIENT DATA
MEXICO
SOUTH AMERICA
CARIBBEAN SEA
HAWAII
TUAMOTU ARCHIPELAGO
180°
170°
160°
150°
140°
130°
120°
110°
100°
90°
80°
70°
30°
20°
10°
0°
10°
20°
30°
40°


AUGUST 1961–1970
FIG. 8–OBSERVED MEAN VALUES
—0000— BAROMETRIC PRESSURE (MILLIBARS).
RESULTANT WIND DIRECTION.
No. RESULTANT WIND SPEED (KTS.).
No. AVERAGE WIND SPEED (KTS.) REGARDLESS OF DIRECTION.
1012
1016
1020
1024
1016
60° N.
55 N.
50 N.
45 N.
40 N.
35 N.
30 N.
25 N.
20 N.
180° W.
175 W.
170 W.
165 W.
160 W.
155 W.
150 W.
145 W.
140 W.
135 W.
130 W.
125 W.
120 W.
115 W.


AUGUST 1970
FIG. 9-OBSERVED VALUES
-0000- BAROMETRIC PRESSURE (MILLIBARS).
RESULTANT WIND DIRECTION.
No. RESULTANT WIND SPEED (KTS.).
No. AVERAGE WIND SPEED (KTS.) REGARDLESS OF DIRECTION.
1008
1012
1016
1020
1024
1020
1016
60° N.
55 N.
50 N.
45 N.
40 N.
35 N.
30 N.
25 N.
20 N.
180° W.
175 W.
170 W.
165 W.
160 W.
155 W.
150 W.
145 W.
140 W.
135 W.
130 W.
125 W.
120 W.
115 W.


August 1-14, 1970
Part II, Supplement 1
Sea-surface Temperature °F.,
CALIFORNIA FISHERY MARKET NEWS
MONTHLY SUMMARY - AUGUST
U.S. DEPARTMENT OF THE INTERIOR
Fish and Wildlife Service
Bureau of Commercial Fisheries
Fishery-Oceanography Center
P.O. Box 271
La Jolla, California 92037
NOTE: Dashed lines indicate positions of 60° and 64° isotherms for 1969.
VANCOUVER I.
C. BLANCO
C. MENDOCINO
DAVIDSON
PT. CONCEPTION
SAN JUAN
SHOWBOAT
GUADALUPE I.
ERBEN BK.
50°
45°
40°
35°
30°
135°
130°
125°
120°
115°
54
52
56
55
58
60
62
64
66
68
70
72
74
51


August 15-31, 1970
Part II, Supplement 2
Sea-surface Temperature °F.,
CALIFORNIA FISHERY MARKET NEWS
MONTHLY SUMMARY - AUGUST
U.S. DEPARTMENT OF THE INTERIOR
Fish and Wildlife Service
Bureau of Commercial Fisheries
Fishery-Oceanography Center
P.O. Box 271
La Jolla, California 92037
NOTE: Dashed lines indicate positions of 60° and 64° isotherms for 1969.
60° 1969
64° 1969
VANCOUVER I.
C. BLANCO
S. MENDOCINO
DAVIDSON
PT. CONCEPTION
ERBEN BK.
SAN JUAN
SHOWBOAT
GUADALUPE I
50°
45°
40°
35°
30°
135°
130°
125°
120°
115°
56
58
60
62
64
66
68
70
72
54
55
52
56
52
51
54
54
58
70
72
74

UNITED STATES DEPARTMENT OF THE INTERIOR
U.S. FISH AND WILDLIFE SERVICE
BUREAU OF COMMERCIAL FISHERIES
Fishery-Oceanography Center
La Jolla, California 92037

BULLETIN NO. 70-4

ALBACORE FISHERY OFF OREGON COLLAPSES, APPEARS HEADED FOR CENTRAL CALIFORNIA

After record landings of over 4,000 tons of albacore for the month of July, the albacore fishing off Oregon collapsed during the first week of August. This event was unexpected and happened abruptly. Boats fishing in the vicinity of Columbia River, the area of best albacore fishing along the entire U.S. west coast during the last week in July, reported high scores of 800-1,300 fish on July 30, but dropped to an average of about 50 fish on July 31. The reasons for the apparent disappearance of albacore from the waters off the Pacific Northwest are not understood, but a possible explanation is given later.

In spite of large-scale scouting during the first week of August, fishermen were not able to get back on the fish in the offshore area from southern Oregon to Vancouver Island. However, indications of good fishing and fair weather were found off northern California on August 5. On that day a commercial boat picked up 135 fish offshore between Cape Mendocino and Eureka and R/V PROTEUS from Stanford University, while on an oceanographic cruise, located a very large concentration of albacore about 130 miles off Cape Mendocino. By August 7, a medium-size fishing fleet had gathered 60-70 miles offshore Cape Mendocino to Eureka and good scores again prevailed with most vessels reporting 200 fish per day.

Unfortunately, the traditional windy weather that usually occurs in this area during this time of the year resumed and caused most of the fleet to return to port at Eureka by August 9. High winds and sloppy seas have continued to seriously hamper fishing in this area. However, a portion of the fleet returned to sea off northern California by August 11, and reported good fishing in rough weather, and some boats reported that the fish appeared to be moving southward below Cape Mendocino. Strong winds have prohibited fishing activity in the vicinity south of Cape Mendocino.

On August 13, a sportboat scouting for albacore in the region 70-130 miles southwest of Morro Bay between the 1908 and 1901 fathom spots found a large area of albacore. In 2 days this sportboat caught 2-1/2 tons of albacore fishing two trolling lines and two rod and reels.

While the albacore fishing off Oregon ebbed during the first 2 weeks of August, it increased off southern California to the best level in about 3 years. R/V ELLEN B. SCRIPPS, of Scripps Institution of Oceanography, while on an oceanographic cruise, reported a large concentration of albacore 150 miles WSW of Cortez Bank on August 3. A small fleet began fishing near the 213 fathom spot off San Diego at about this same time and have averaged about 100 fish per day with some single day scores as high as 250 fish. Fishing has continued at this level for nearly the past 2 weeks and landings in San Diego are probably the best in 3 years. However, sea surface temperatures off southern California are warming to 70-75° F and are causing some concern that the albacore may either run deeper or move to cooler waters.

A westward shift of the 60° F isotherm between northern and central California is the result of intense coastal upwelling caused by the predominantly north-northwest winds along the coast south of Cape Blanco to Point Conception. Offshore, sea surface temperatures are 2-3° F warmer than last year between latitudes 30 and 42° N and west of longitude 128° W. Also, the area between the 60 and 66° F isotherms is much smaller than last year, keeping water with temperatures most favorable to albacore compressed into a narrow band perpendicular to the coast north of Cape Mendocino and parallel to the coast south of Cape Mendocino.

During the last 2 weeks of July, when record high albacore fishing was found off Oregon, and during most of the 1967-1969 albacore seasons, when the fishing was centered in the Pacific Northwest, an upper atmospheric ridge was located over the eastern Gulf of Alaska and western Canada which kept storm systems from entering the Pacific Northwest. The collapse of the fishing off Oregon during the first week in August was accompanied by the development of an upper atmospheric trough and subsequent formation of a series of low pressure systems over the Gulf of Alaska. This meteorological condition has allowed repeated minor storm systems to strike the Washington and Oregon coasts during the first 2 weeks of August. These storm systems have resulted in increased wind mixing and evaporation over the eastern Gulf of Alaska and off the Pacific Northwest and also transported cool water from the north southward. This has resulted in a retardation of the seasonal warming that normally occurs in the ocean off the Pacific Northwest during this time of year. Although the sea surface temperatures off Oregon and Washington are not sub-optimal for albacore it may be that this decrease in seasonal warming stimulated the albacore to migrate from the area or elicited a change in behavior so that the fish are not striking.

According to the Extended Forecast Division of the Weather Bureau, the upper level trough over the Gulf of Alaska is expected to persist during the next 2 weeks, allowing storm systems to develop and associated frontal bands to pass over the Pacific Northwest. Winds and seas during the passage will be moderate from the west-southwest off the Washington and Oregon coasts. Above average temperatures over inland regions of the Pacific Southwest will cause a deep thermal trough over the same area. This trough coupled with high pressure off California will create tight pressure gradients and strong north to northwest winds along the southern Oregon, northern and possibly central California coasts.

The best potential fishing grounds within the next 2 weeks should be in the central California region extending from San Juan Seamount to off Monterey. This area remains virtually unexplored during the first 2 weeks of August although scattered catches of albacore have been reported as close in as 30 miles off Pigeon Point and a relatively large catch was taken by a sportboat off Morro Bay. The offshore area between Eureka and Cape Mendocino should also yield good fishing if the northerly winds abate, however, weather conditions there will probably keep fishing activity low. At this time we do not anticipate that the fishery will move northward and redevelop off Oregon. Also we do not expect a major fishing area to develop off southern California because of warm water conditions.

Due to the current poor fishing off Oregon and the reduced fishing off northern California because of strong winds, the 1970 seasonal albacore landings will probably not be as high as they have been for the past 3 years and could total less than 20,000 tons.

The Western Fishboat Owners office in Astoria has shifted its single-sideband broadcast to 6210.4 kHz, still at about 1900 PDT daily.

For more detailed albacore information off the Oregon coast please see Oregon State University Albacore Central Fish Bulletins 70-G and 70-H. These materials should be available through most of the same outlets as the BCF Fish Bulletins.

August 14, 1970

Staff, Fishery-Oceanography Group
R. Michael Laurs, Leader

UNITED STATES DEPARTMENT OF THE INTERIOR
U.S. FISH AND WILDLIFE SERVICE
BUREAU OF COMMERCIAL FISHERIES
Fishery-Oceanography Center
La Jolla, California 92037

BULLETIN NO. 70-5

ALBACORE JIG FISHING TRANSIENT IN CALIFORNIA WATERS, BAIT FISHING CONTINUES IN PACIFIC NORTHWEST

The albacore fishery has been transient during the past 15-day period. Boats have had to spend much time running to search for fish and to avoid rough weather. Consequently, no area along the Pacific coast has yielded consistently good albacore fishing. However, high jig-boat scores have been made on some days in California waters, and good catches have been reported on some days by bait boats fishing in the vicinity of the Columbia River and near the 213 fathom spot southwest of San Diego.

The best jig-fishing along the coast as of August 31 is 80-100 miles offshore from Cape Mendocino to Point Arena. Good fishing in this area resumed by August 24 when boats fishing 60 miles off Cape Mendocino reported high scores of 250-300 fish. A small fleet of boats reported moderate catches of about 150 fish per day in the Gorda Sea Valley from Eureka to Cape Mendocino also on August 24. The fishing in northern California waters improved during the last week of August and many boats that had been fishing off San Francisco moved up to Point Arena and north. By August 31, high scores of 400 fish were reported with most boats catching 200-250 fish per day. The fleet fishing the district from Punta Gorda to Cape Vizcaino reported best fishing in 59° F water, although temperatures as high as 63° F are in the area. Albacore caught in northern California waters are averaging 13 to 16 pounds.

On August 28 a new area of fish was reported 50 miles outside Davidson Seamount and by August 31 a small fleet had gathered there. Scores in this area, although somewhat lower than between Point Arena and Cape Mendocino, have been 75-150 fish per day with highs up to 300 fish.

Albacore were reported over a large area along a tight temperature gradient of 57-63° F, 120-160 miles offshore of San Francisco on August 22 and fishing there remained good until about August 27. Scores in this area averaged 350-500 fish per day and many boats reported catching more than 700 fish on some days. The fish sizes were mixed, from 10-40 pounds, with about a 14-16 pound average.

Excellent jig fishing, with some 1000 fish scores and many 600 fish scores, was reported on August 18 in the area near the compass rose outside San Juan Seamount. A large fleet of jig boats gathered in the area from Rodriquez Dome to San Juan Seamount to about 80 miles southwest of Point Arguello and many boats reported 500-600 scores on August 19. Good fishing, on 11-15 pound albacore, continued in this area, with catches averaging 250-300 fish per day until about August 23. By August 25, most of the fleet that had been fishing here moved northward to Point Arena and San Francisco because of poor fishing and high winds.

Fair catches, of about 80-100 albacore per day, continued to be taken, mostly by bait boats, in the vicinity of the 213 fathom spot and the dumping grounds southwest of San Diego until about August 27, when fishing slowed. Albacore caught in this district have averaged 20-25 pounds, which is much larger than fish which have been caught this year from other areas along the U.S. west coast. Many of the albacore caught off San Diego during August have been from waters above 70° F. Incidental catches of skipjack and yellowfin tuna have also been reported recently from the San Diego area.

Fair to very good bait boat fishing has been reported off Oregon and southern Washington, but jig fishing there has been poor. Most of the bait boat activity has been centered within 60 miles of the coast between Newport and Grays Harbor. Bait catches in the Northwest have averaged as high as 500-600 fish per day, and one bait boat reported catching 20 tons of albacore between the Columbia River and Grays Harbor on August 20. The fish are averaging 15-20 pounds. Most of the larger California bait boats are fishing off Oregon and Washington. Except for moderate catches taken near the dumping grounds off the Columbia River on August 19 and 24, jig fishing off Oregon has averaged only about 20 fish per day.

California albacore landings for August should total about 2500 tons which is about 2-1/2 times higher than California landings for August last year. About 600 tons of the August total were landed in San Diego, with most of the remainder going to northern California ports. According to the Oregon Fish Commission, preliminary landings figures for Oregon for August are about 3500 tons. Most of the albacore landed in Oregon in August was caught by jig boats during July before they departed Pacific Northwest waters. The total U.S. west coast albacore landings for 1970 are about 10,000 tons. This is slightly below the long-term average and about 3000 tons below last year for this time.

The predominant weather feature during the last 2 weeks of August has been the persistent moderate to strong north-northwesterly winds all along the U.S. west coast. These winds have caused intense upwelling and much colder than normal sea surface temperatures near shore from the Columbia River south to Point Arena. Less intense upwelling occurred south of Point Arena along the central California coast, however, sea surface temperatures in this area are still 1-3° F below the long-term average and the temperatures for the same period last year. Offshore northern

and central California, sea surface temperatures have warmed at a greater than normal rate, causing a strong temperature gradient to develop from the coast out to longitude 126° W between Cape Blanco and San Francisco. The tightest gradient is located between Point St. George and Point Arena, and it is in this area that the best jig fishing has developed.

These north-northwesterly winds have been caused by a ridge of high pressure located over the eastern Gulf of Alaska and the Pacific Northwest and a well developed thermal trough over the interior regions of the Pacific Southwest. Although several breaks in this pattern occurred during the past 2 weeks, none of them lasted long enough to have any pronounced effect.

Sea surface temperatures off Washington and Oregon west to 130° W are from 1-5° F below the long-term average and temperatures for the same period in 1969. The seasonal cooling in this region which usually begins in the middle of September has started 2-3 weeks earlier this year and will continue as late summer-early fall storm systems in the Gulf of Alaska move eastward over western Canada and the Pacific Northwest.

The Extended Forecast Division of the Weather Bureau expects a deeper than normal upper level trough to develop over the eastern Gulf of Alaska, western Canada and the Pacific Northwest during the first 2 weeks of September. This condition will allow storm fronts to move into Washington and Oregon causing moderate south-southwesterly winds offshore from Cape Flattery south to Cape Blanco. Above normal temperatures are expected to continue over the Pacific Southwest creating a well developed thermal trough over the inland desert and valley regions of California. This trough in conjunction with high pressure off California will cause the moderate to strong north-northwesterly winds to continue blowing from Cape Blance south to outside the Channel Islands off southern California.

The offshore area between Eureka and Cape Mendocino holds the most promise for best jig fishing during the next 2 weeks, providing weather conditions continue to permit fishing effort. The central California district between Point Conception to San Francisco also has good potential. Bait fishing in the Pacific Northwest may not continue at present levels because of decreasing water temperatures.

For more detailed albacore information off the Oregon coast please see Oregon State University Albacore Central Fish Bulletins 70-I and 70-J. These materials should be available through most of the same outlets as the BCF Fish Bulletins.

September 1, 1970

Staff, Fishery-Oceanography Group
R. Michael Laurs, Leader